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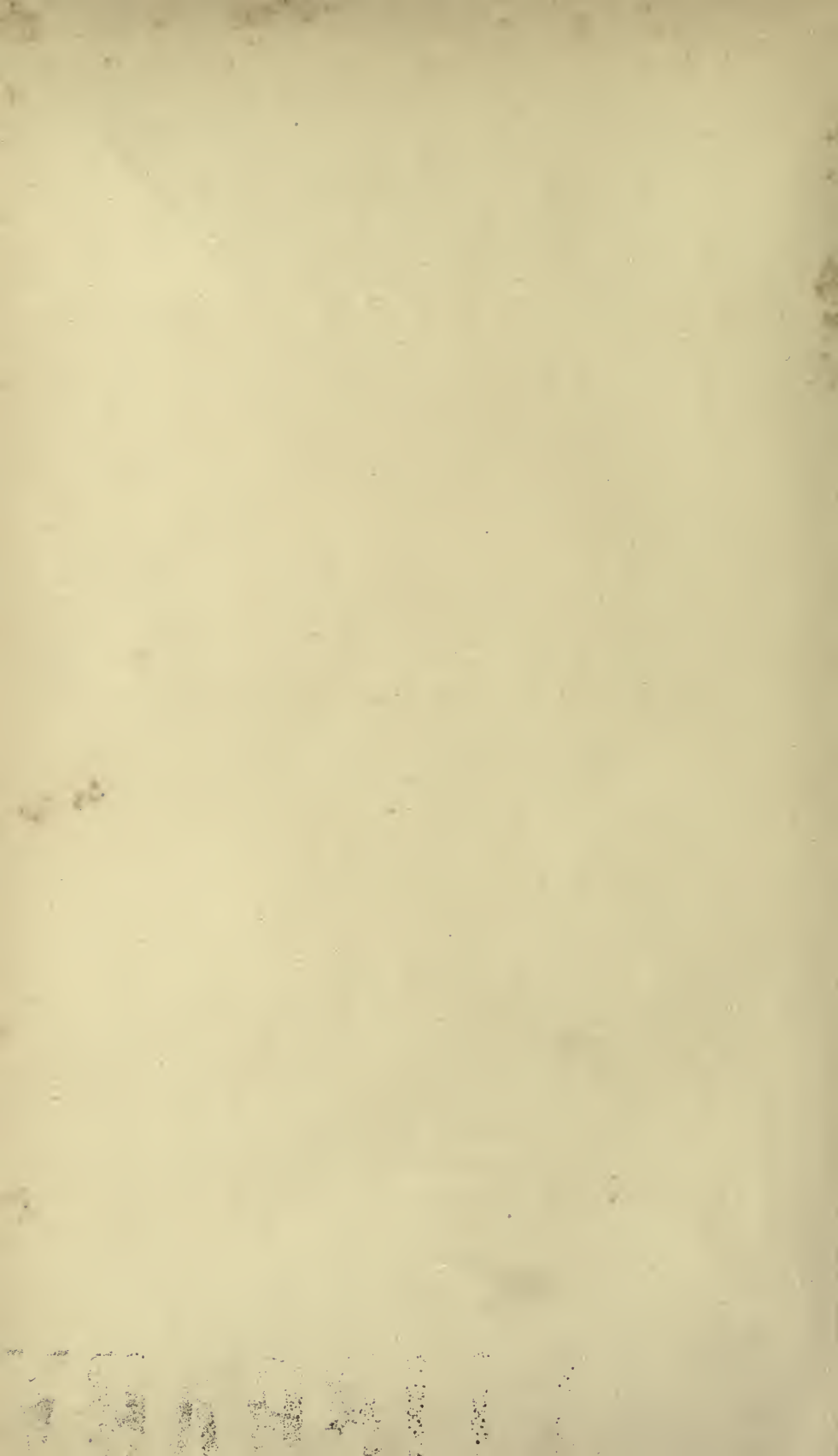
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THE

BIRDS OF SOUTH AFRICA

BY

ARTHUR C. STARK, M.B.

VOL. I.

WITH A MAP AND ILLUSTRATIONS

London

R. H. PORTER

7, PRINCES STREET, CAVENDISH SQUARE, W.

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JOHN BALE, SONS AND DANIELSSON, LTD.
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PREFACE.

THE present volume is the first of a series in which it is proposed to give an account of the Fauna of Africa south of the Zambesi and Cunéné Rivers.

It relates to the Passerine Birds, and contains descriptions of twelve out of the twenty South African families, and their constituent species.

This portion of the "Fauna" has been undertaken by Dr. A. C. Stark, who, besides being well acquainted with the literature of the subject, has spent a considerable time in various parts of the country to which it relates, and has had excellent opportunities of observing the birds in their native haunts.

W. L. S.

South African Museum, Capetown.



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INTRODUCTION.

THE present volume deals with about one half of the Passerine birds found in that portion of South Africa which lies to the south of the Zambesi and Cunéné Rivers.

In it I have endeavoured to arrange the subject matter in such a manner that a tyro in ornithology may be enabled to identify a specimen with a certain amount of ease and accuracy. The plan and arrangement adopted is based upon that followed by Mr. Eugene Oates in the volumes on "Birds" in the "Fauna of British India," viz., to give a full description, illustrated where necessary, of the characters which define the different genera, followed by a key to the species included in each. Under each species references are given to the author by whom it was first described, to the principal writers on South African ornithology by whom it is mentioned, to the volume of the Catalogue of Birds in the Collection of the British Museum in which it is described, and to Captain Shelley's "Birds of Africa," as well as to a figure, when one exists.

The majority of the descriptions have been taken from specimens in the collection of the South African Museum at Cape Town, the remainder from examples in the Albany Museum at Grahamstown, the Durban Museum, Natal, and my own collection. A few of the species described are not represented in South African collections, and in these cases I have either consulted the original descriptions or have examined the "type" specimens in the British or Berlin Museums.

In the descriptions I have to a large extent followed the plan adopted in the Catalogue of Birds in the British Museum, both as regards the feathered regions and the

colours. About two-thirds of the nests and eggs described were collected by myself in various parts of Cape Colony, Natal, and the Transvaal between 1892 and 1898; the remainder are described from thoroughly authenticated specimens in the extensive collection in the South African Museum, unless it is otherwise stated.

Under "*Habits*" I have endeavoured to give a short and concise account of the general habits, food, notes and nidification of each species. When not otherwise stated the information has been taken and generally much condensed from field-notes made by myself between 1892 and 1898 at various localities on the coast between the mouths of the Orange and Zambesi Rivers, and during the course of several expeditions through the inland districts of Cape Colony, Natal, the Orange Free State and the Transvaal. For information regarding the Birds of Damara Land I have drawn freely from the late Mr. J. H. Gurney's edition of Andersson's "*Birds of Damara Land*;" I have also culled much valuable information regarding the birds of Natal and the Transvaal from the excellent field-notes of Mr. Thomas Ayres, of Potchefstroom, published in "*The Ibis*," as well as from the valuable contributions of Dr. Sharpe and Captain Shelley to the same periodical and to "*The Proceedings of the Zoological Society*." In addition, frequent extracts have been made from the classical pages of Le Vaillant, Sir Andrew Smith and Layard and Sharpe, and from papers contributed to "*The Ibis*," "*The Proceedings of the Zoological Society*," and "*The Zoologist*" by various field naturalists and students of ornithology.

With two exceptions all the figures in this volume are from original drawings by Mr. H. Grönvold, of the Natural History Museum at South Kensington, and I feel greatly indebted to that gentleman for the care and unwearied patience with which he has endeavoured, and succeeded, in meeting my wishes.

To Mr. W. L. Sclater, the Director of the South African Museum at Cape Town, I am greatly indebted for allowing me every facility for studying the collections under his charge. My thanks are due to Dr. Sharpe, of the British Museum, to Dr. Schönland, of the Albany Museum, and to Mr. Quekett,

of the Durban Museum, for allowing me access to their collections.

To Dr. P. L. Selater I am indebted for much valuable advice, for giving me free access to the library of the Zoological Society of London, and in addition, to the labour he has bestowed on the correction of my proofs.

ARTHUR COWELL STARK.

DURBAN, NATAL,
October 10, 1899.

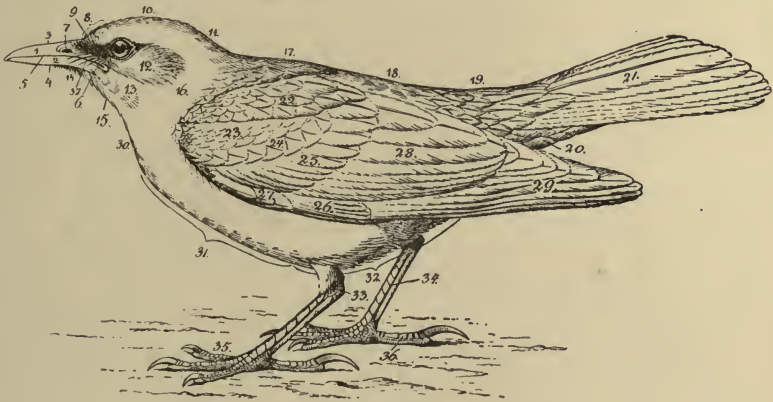
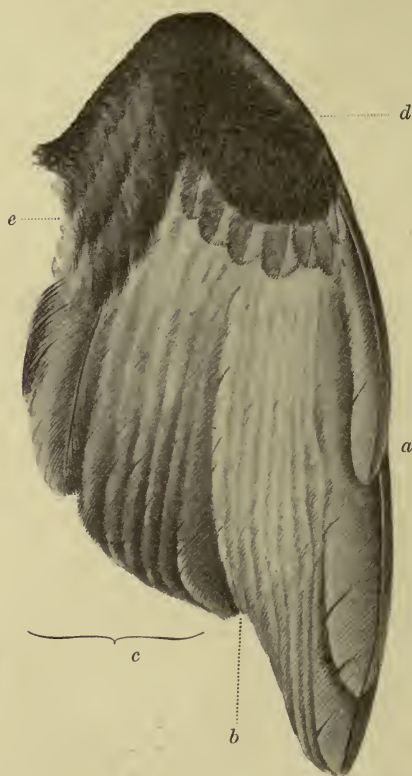


DIAGRAM OF A STARLING (*Spreo bicolor*):

TO SHOW THE NOMENCLATURE OF THE PLUMAGE AND OTHER EXTERNAL PARTS.

- | | |
|--|--|
| 1. Maxilla or upper mandible. | 20. Lower tail-coverts. |
| 2. Mandible or lower mandible. | 21. Rectrices or tail feathers. |
| 3. Culmen or ridge. | 22. Scapulars. |
| 4. Gonys. | 23. Lesser wing-coverts. |
| 5. Commissure or line of junction of the maxilla and mandible. | 24. Middle wing-coverts. |
| 6. Gape. | 25. Greater wing-coverts. |
| 7. Nostril. | 26. Primary coverts. |
| 8. Forehead. | 27. Bastard-wing or thumb. |
| 9. Lore. | 28. Secondaries or cubitals (quills springing from the forearm, from 6 to 30). |
| 10. Crown or vertex. | 29. Primaries (the outer 9 to 16 quills) springing from the hand. |
| 11. Nape. | 30. Lower throat or fore-neck. |
| 12. Ear-coverts. | 31. Breast. |
| 13. Cheeks. | 32. Abdomen. |
| 14. Chin. | 33. Tibio-tarsal or ankle joint. |
| 15. Throat. | 34. Tarsus or tarso-metatarsus. |
| 16. Side of neck. | 35. Inner-toe or second toe. |
| 17. Back. | 36. Hind-toe, first toe, or hallux. |
| 18. Rump. | |
| 19. Upper tail-coverts. | |



UNDER SURFACE OF THE WING OF A CUCKOO SHRIKE :
TO SHOW THE DISTRIBUTION OF THE FEATHERS, THE TEN OUTER QUILLS OR
PRIMARIES SPRINGING FROM THE HAND, THE INNER QUILLS OR SECONDARIES FROM
THE FOREARM.

- | | |
|---------------------------------------|-------------------------------|
| <i>a.</i> First or outer primary. | <i>d.</i> Under wing-coverts. |
| <i>b.</i> Tenth or innermost primary. | <i>e.</i> Axillary feathers. |
| <i>c.</i> Secondaries. | |

All measurements are in inches and decimals of an inch.

The length is (unless otherwise stated) taken from the tip of the bill to the end of the longest tail-feather.

The length of the wing from the angle of the wing to the tip of the longest quill, measured straight.

That of the tail from the root of the tail, whence the quills spring, to the tip of the longest feather.

The tarsus is measured from the joint, or articulation of the tarsus with the tibia, to that with the middle toe.

The culmen is measured from the frontal feathers to the point of the bill.

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THE FAUNA OF SOUTH AFRICA.

AVES.

BIRDS are warm-blooded vertebrate animals with an external covering of feathers. They possess a four-chambered heart and a complete double circulation, and have a single aortic arch on the right side. The anterior pair of limbs are modified to form wings. The bones of the skull join at an early period to form a continuous brain-case which articulates with the vertebral column by a single occipital condyle. The *mandible* or lower jaw articulates with the skull on each side through the medium of a small bone, the *quadrate*. The *præmaxilla* and portions of the *maxillæ* are prolonged anteriorly and covered by a horny sheath to form the *maxilla*, upper mandible, or superior half of the bill or beak; the mandibular portion or lower mandible is formed by a prolongation of the dentary bones of the mandible. No existing birds have teeth, but many extinct forms were well provided in this respect, and the germs are still to be found in the embryonic Penguin. The bones of the great majority of birds are to a large extent hollow, and capable of being filled with warm air from the lungs through the medium of a series of intervening *air-sacs*. All birds are *oviparous*.

The one point which distinguishes birds from all other existing animals is their covering of feathers. These are used as a means of flight, as a protection to the body, or as ornaments. Excepting in a few instances, as in the Penguins and Ostriches, the contour or body feathers grow from certain definite tracts, called *pterylæ*, separated by intervening spaces, either bare or only covered with down, but overlapped by the feathers on each side, and known as *apteriæ*. The arrangement and extent of the feathered tracts varies in different groups of birds and is of considerable importance in indicating their affinities.

CLASSIFICATION.

IN the arrangement of the higher groups or orders of South African birds, I follow the classification proposed by Dr. P. L. Sclater in a paper contributed to the *Ibis* for 1880, "On the present state of the Systema Avium," as follows:—

Class **AVES.**

Subclass **CARINATÆ** (with a keeled Sternum).

- Order I. **Passeres** (Crows, Starlings, Orioles, Weaver Birds, Finches, Larks, Wagtails, Creepers, Sunbirds, Tits, Shrikes, Warblers, Thrushes, Flycatchers, Cuckoo-Shrikes, Drongos, Swallows.
- II. **Picariæ** (Woodpeckers, Barbets, Honey Guides, Trogons, Colies, Kingfishers, Bee-eaters, Rollers, Hornbills, Hoopoes, Swifts, Nightjars, Cuckoos, Plaintain Eaters).
- III. **Psittaci** (Parrots).
- IV. **Striges** (Owls).
- V. **Accipitres** (Falcons, Kites, Buzzards, Eagles, Hawks, Vultures, Secretary Bird).
- VI. **Steganopodes** (Frigate Birds, Pelicans, Cormorants, Darters, Gannets, Tropic Birds).
- VII. **Herodiones** (Herons, Storks, Ibises).
- VIII. **Odontoglossæ** (Flamingoes).
- IX. **Anseres** (Geese, Ducks).
- X. **Columbæ** (Pigeons, Doves).
- XI. **Pterocletes** (Sand Grouse).
- XII. **Gallinæ** (Game Birds, Guinea Fowl, Francolins, Quails).
- XIII. **Hemipodii** (Three-toed or Button Quails).
- XIV. **Fulicariæ** (Coots, Moorhens, Rails, Finfoot).
- XV. **Alectorides** (Cranes and Bustards).

- XVI. **Limicolæ** (Thickheads, Coursers, Plovers, Sandpipers, Snipe, Jaçanas).
- XVII. **Gaviæ** (Skuas, Gulls, Terns).
- XVIII. **Tubinares** (Albatrosses, Shearwaters, Petrels).
- XIX. **Pygopodes** (Divers, Grebes).
- XX. **Impennes** (Penguins).

Subclass RATITÆ (Sternum without a keel).

- XXI. **Struthiones** (Ostriches).

Order I. PASSERES.

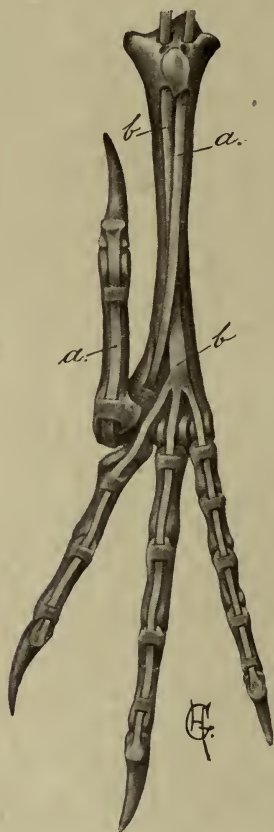
About six thousand, or one half the existing species of birds, are included in the *Passeres* or "Perching Birds."

A Passerine Bird is distinguished by a combination of several characters, no one of which will alone define it.

I.—Each foot has four toes (except in *Cholornis*, in which the outer toe is reduced to a stump), the 1st, or hind toe, directed backwards; the 2nd, 3rd and 4th forwards. The 2nd toe is always the innermost. All four toes are on a level, the hind toe not raised above the others, and are never connected by web or membrane beyond the first joint. Owing to a peculiar arrangement of the plantar tendons connecting the muscles of the leg with the toes, the hind toe is capable of being moved independently of the front toes. The tendon of the *flexor longus hallucis*, which is inserted into the hind-toe, crosses the tendon of the *flexor perforans digitorum*, which splits up to supply the front toes, at the back of the *tarso-metatarsus*, but without becoming connected with it, so that the contraction of either muscle controls the movement of the hind or front toes only, as the case may be. This "*schizopelmous*" arrangement of the plantar tendons is found in all Passerine Birds, excluding the family of Oriental Broadbills (*Eurylæmidæ*); but it also obtains in the Hoopoes (*Upupidæ*), among the *Picariæ* (see figure, p. 4).

II.—The palate is *ægithognatous*, i.e., the *maxillo-palatine* bones are separated from one another and from the *vomer* by an interval; the *vomer* is truncated in front and cleft behind so as to embrace the rostrum of the *basisphenoid* (see figure, p. 5). This arrangement of the palate-bones is however not exclusively passerine; it exists also in the *Cypselidæ* (Swifts) and *Picidæ* (Woodpeckers) among the *Picariæ*.

III.—A certain arrangement of the wing-muscles is peculiar to the majority of the Passeres, but not to all, and is not found in other orders. The distal tendon of the *tensor petagii brevis*, a muscle that runs parallel to the humerus, from the shoulder to



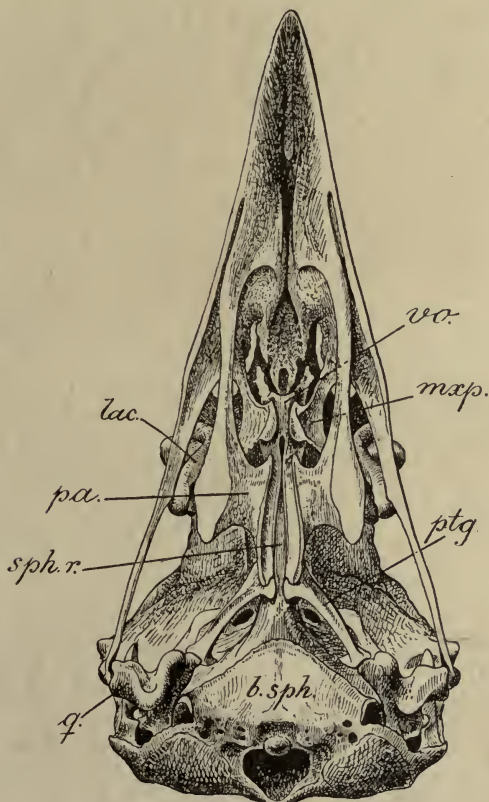
Foot, from behind, of European Raven (*Corvus corax*), showing the *Passerine* or *schizopelmous* arrangement of the deep plantar tendons, which cross without being connected, and their separate action. (Dissected and drawn by H. Grönvold.)

a, *flexor longus hallucis*; *b*, *flexor perforans digitorum*.

its insertion into the fascia and muscles of the forearm, retains its independence after its junction with the *extensor metacarpi radialis longus*, and turns back to be inserted into the external condyle of the humerus, close to the point of origin of the latter muscle.

IV.—In Passerine birds the oil gland is nude. Cæca are present, though small. The atlas is perforated by the odontoid process (Beddard). The young are hatched naked and helpless.

V.—The *Syrinx*, the vocal organ of birds, attains its highest development among the Passeres. In accordance with the number,



Base of skull of *Corvultur albicollis* (White-necked Raven), showing an ægithognathous arrangement of the palate-bones.

vo., vomer; *mxp.*, maxillo-palatine; *lac.*, lacrymal; *pa.*, palatine; *sph.r.*, rostrum of sphenoid; *b.sph.*, basi-sphenoid; *ptg.*, pterygoid; *q.*, quadrate.

arrangement and attachment of its muscles the Order is sub-divided into:—

(1) *The Acromyodi*.—With the intrinsic muscles of the syrinx inserted into the ends of the bronchial semi-rings.

(2) *The Mesomyodi*.—With the intrinsic muscles inserted into the middle of the bronchial semi-rings.

The *Mesomyodi* are not represented in South Africa, and need not further concern us.

The *Acromyodi* are again sub-divided into the :—

(i.) *Normales* or *Oscines*, with from four to seven pairs of intrinsic syringeal muscles.

(ii.) *Abnormales* or *Suboscines*, containing only the Australian *Menuridæ* (Lyre Birds) with three pairs of muscles, and *Atrichiidæ* (Scrub Birds) with two pairs only.

PASSERES. (*Oscines*.)

Probably no two ornithologists are in complete accordance with regard to the subdivisions of the *Oscines*.

In subdividing the South African *Oscines* into the following twenty families I follow to a large extent the classification proposed by Dr. Sharpe in a paper read before the Second Ornithological Congress at Buda Pest in 1891, on "Recent Attempts to Classify Birds."

Families of OSCINES.

- I. *Corvidæ* (Crows).
- II. *Sturnidæ* (Starlings and Ox-peckers).
- III. *Oriolidæ* (Orioles).
- IV. *Ploceidæ* (Weaver Birds, Waxbills, Bishop Birds).
- V. *Fringillidæ* (Finches and Buntings).
- VI. *Alaudidæ* (Larks).
- VII. *Motacillidæ* (Longclaws, Pipits, Wagtails).
- VIII. *Certhiidæ* (Creepers).
- IX. *Promeropidæ* (Long-tailed Sugar Birds).
- X. *Nectariniidæ* (Sunbirds).
- XI. *Zosteropidæ* (White-eyes).
- XII. *Paridæ* (Tits).
- XIII. *Laniidæ* (Shrikes, Bush Shrikes).
- XIV. *Crateropodidæ* (Babblers, Bulbuls).
- XV. *Sylviidæ* (Warblers).
- XVI. *Turdidæ* (Thrushes, Chats, Robin-Chats).
- XVII. *Muscicapidæ* (Flycatchers).

XVIII. *Dicruridæ* (Drongos or Fork-tails).

XIX. *Campophagidæ* (Cuckoo-Shrikes).

XX. *Hirundinidæ* (Swallows).

Key to the Families of South African Passeres

(Not arranged in their proper sequence, and applicable to South African species only).

In drawing up the following scheme I have followed Mr. Oates in making use of the plumage of the young for diagnostic purposes.

- a. Tarsus scutellated both anteriorly and posteriorly, the posterior aspect rounded *Alaudidæ*, vol. i.
- b. Tarsus covered laterally with two entire longitudinal plates which meet in a ridge posteriorly.
 - a². Tongue tubular; the edges of both mandibles minutely serrated for their anterior third or half *Nectariniidæ*, vol. i.
 - b². Tongue semi-tubular, or with the sides or tips frayed out; bill not serrated.
 - a³. With ten primaries; tail very long and much graduated; no white eye-ring *Promeropidæ*, vol. i.
 - b³. With nine primaries (the outer being very minute); tail rather short and square; a conspicuous white eye-ring *Zosteropidæ*, vol. i.
 - c². Tongue not tubular nor semi-tubular.
 - a³. With only nine easily visible primaries, the two outer nearly equal.
 - a⁴. Bill long, slender and notched; the secondaries as long or nearly as long as the primaries *Motacillidæ*, vol. i.
 - b⁴. Bill short, broad, flat, notched and deeply cleft; the secondaries reaching the middle of the wing *Hirundinidæ*, vol. ii.
 - c⁴. Bill deep and conical; the secondaries reaching halfway between the middle and end of wing *Fringillidæ*, vol. i.
 - d². With ten primary wing-quills, the outer short but easily seen.
 - a⁴. The culmen prolonged backwards to a point among the frontal feathers; the nostrils within or near the line of the forehead and nearer the culmen than the cutting edge of the upper mandible *Ploceidæ*, vol. i.

- e*⁴. The culmen not prolonged backwards beyond the edge of the frontal feathers; the nostrils outside the line of forehead and not nearer the culmen than to the edge of upper mandible.
- a*⁵. Plumage of young like that of adult female, but paler.
- a*⁶. Nostrils completely overhung and concealed by plumes and bristles directed forwards.
- a*⁷. Size large, wing over 12·00 (in South African species); colour black or black and white..... *Corvidæ*, vol. i.
- b*⁷. Size small, wing less than 3·50 *Paridæ*, vol. i.
- b*⁶. Nostrils nearly bare, overhung by a few hairs or bristles only.
- c*⁷. Without rictal bristles *Certhiidae*, vol. i.
- d*⁷. With rictal bristles..... *Crateropodidae*, vol. ii.
- b*⁵. Plumage of young like that of adult female, but brighter; tail feathers ten or twelve..... *Sylviidae*, vol. ii.
- c*⁵. Plumage of young spotted above and below; with twelve tail feathers.
- c*⁶. Nostrils not overhung by hairs ... *Turdidae*, vol. ii.
- d*⁶. Nostrils overhung by hairs *Muscicapidae*, vol. ii.
- a*⁵. Plumage of young spotted below, of adults entirely black, tail of ten feathers, forked or nearly square ... *Dicruridae*, vol. ii.
- e*³. Plumage of young cross-barred below, in many cases resembling in this respect that of the adult female; tail with twelve feathers.
- e*⁶. Rump-feathers with spinous stiffened shafts *Campophagidae*, vol. i.
- f*⁶. Rump-feathers without spinous shafts *Laniidae*, vol. ii.
- f*⁵. Plumage of young streaked.
- g*⁶. With rictal bristles; plumage yellow and black *Oriolidae*, vol. i.
- h*⁶. Without rictal bristles, plumage not yellow and black *Sturnidae*, vol. i.

Family I. CORVIDÆ.

Bill stout and strong; the culmen arched; the sides compressed; the edges of both mandibles smooth. Nostrils partially or entirely concealed by bristles or narrow stiffened feathers directed forwards. Wings with ten primaries, the outer, or first, about half the length of the second; the four outermost with their inner edges sinuated. Tail of twelve feathers. Tarsi scutellated anteriorly, posteriorly and laterally covered with two entire plates which are separated from one another and from the anterior scutes by narrow intervals which are reticulated. Feet large and strong; the basal joint of the middle toe united to the lateral toes by membrane. Size large. Sexes alike in plumage; that of the young like that of the adults but paler. Only one moult in the year, in autumn.

This family comprises the well known Crows, Jays, Magpies, and Choughs. The various species are of world-wide distribution, but only three occur in South Africa.

Key to the Genera.

- a. Bill very deep, the depth exceeding the length of the outer toe; nostrils in a very deep groove; tail short and much graduated..... *Corvultur.*
- b. Bill stout, but much less so than in *Corvultur*, the depth less than the length of outer toe; nostrils in a less defined groove; tail longer and not much graduated..... *Corvus.*

Genus I. **CORVULTUR.***Type.*

Corvultur, Lesson, *Traité Orn.* p. 327 (1831) *L. albicollis.*

Bill very deep, the depth exceeding the length of the outer toe, and compressed; the culmen much arched; nostrils oval, at the bottom of a deep groove; the nasal bristles long. Tarsus robust and strongly scutellated, about equal to the culmen in length. Tail short, less than half the length of the wing, and much graduated.

This genus contains two species only, *C. albicollis*, confined to South and East Africa, and the larger *C. crassirostris*, a native of Abyssinia and North-east Africa.

In their habits these birds resemble the larger Crows and Ravens.

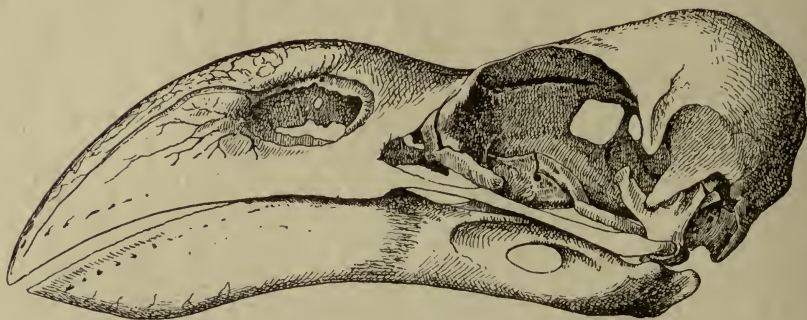
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1. **Corvultur albicollis.** *White-necked Raven.*

Corvus albicollis, *Lath. Ind. Orn.* p. 151 (1790); *Layard, B. S. Afr.* p. 167 (1867).

Le Corbivau, *Levaill. Ois. d'Afr.* ii, p. 5, pl. 50 (1799).

Corvultur albicollis, *Less. Traité d'Orn.* p. 327 (1831); *Gurney, in Andersson's B. Damara Land*, p. 153 (1872); *Sharpe, Cat. B. M.* iii, p. 24 (1877); *id. ed. Layard's B. S. Afr.* p. 417 (1884); *Holub and Pelzeln, Orn. Südafr.* p. 105 (1882); *Shelley, B. Afr.* i, p. 46 (1896).

"Ring-hals" (Ring-neck) of the Dutch.



Corvultur albicollis (skull).

Description. Adult male.—Above and below glossy black, the head glossed with purple, the throat and upper chest shaded with brown; a broad collar of white round the back of the neck, continuous with a concealed white band across the lower throat, only the bases of the feathers being white.

Iris brown; bill dusky brown tipped with white; feet brownish-black.

Length 18·00; wing 15·75; tail 7·10; tarsus 2·10; culmen 3·00.

Adult female.—Resembles the adult male in plumage.

Young.—Browner than the adult; some feathers of the white collar streaked with brown; a pectoral band of white mottled with brown.

Distribution.—South and East Africa. A common species throughout the greater part of Cape Colony, Natal, the Orange Free State and the Transvaal, as well as in Mashonaland, Matabililand and Bechuanaland. It occurs in the southern portion of Great Namaqualand but not in the northern districts or in Damara-

land. It ranges across the Zambesi into Nyasaland, Mosambique and German East Africa, and is found on Mount Kilima-njaro, but further north its place is taken by the larger *C. crassirostris*.

Habits.—Found alike on the coast, among the mountains and on the high veldt, as well as in the Karroo and the sandy wastes of Namaqualand, the “Ring-hals” is one of the most widely distributed and best known birds of South Africa. Where not molested it is a bold and fearless species, frequenting the outskirts of towns and villages and the vicinity of farm-houses, native kraals and outspans, on the look out for offal and scraps of all kinds. When reared from the nest it makes an extremely tame and amusing, if somewhat mischievous pet; it has, in fact, all the habits and idiosyncrasies of the European Raven; its ordinary cry, also, a harsh croak, is, to my ear, exactly similar to that of the latter bird.

In the interior the “Ring-hals” feeds largely on carrion, and is usually the first bird to detect a carcass; on the coast it devours dead fish cast up by the waves, shell-fish of all kinds, the paper-nautilus being a favourite tit-bit, as well as the eggs of penguins and other sea fowl. At times it kills and eats snakes, lizards, frogs and small tortoises. Nor does it disdain an insect diet, beetles, grasshoppers, locusts and termites are all readily devoured, as well as ticks and bots picked from the hides of cattle. I have sometimes amused myself by watching the bold yet cautious and gentle manner in which one of these Ravens will approach a reclining ox, and after a preliminary course of soothing caresses, accompanied by a soft “cawing” note, insert his head into the ear and dexterously extract the ticks. These birds always seem to have a good understanding with the older and more experienced oxen, who will, at a hint from one of them, lie down and place themselves in the most favourable possible position for the extraction of their parasites.

The Ring-hals is usually a resident in Cape Colony and Natal, and roosts all the year round in or near its nest. This latter is invariably, so far as I have observed, built on a rock or krantz, on a ledge or in a hole. It is large and firmly constructed of dead sticks and twigs mixed with pieces of turf and tufts of grass, and is lined with rootlets, wool, hair, grass and various soft material. The eggs, almost invariably three in number, vary considerably in colour and shape, even in the same nest; they are of some shade of bluish-white, more or less thickly marked with various shades of olive-brown, and are not to be distinguished with certainty from

eggs of the European Raven (*Corvus corax*). They average 2.05 × 1.32.

The same nest is occupied year after year. In the neighbourhood of Cape Town the eggs are usually laid in August.

Genus II. **CORVUS.**

Type.

Corvus, *Linn. Syst. Nat.* i, p. 155 (1766).....*C. corax*.

Beak hard, stout, compressed, straight at the base, arching towards the point and sharp at the edges. Nostrils basal, in a more or less defined groove and generally hidden by stiff feathers directed forwards. Wings long and graduated; the first primary much shorter than the second, but more than half as long as the third, the fourth the longest. Tail more or less graduated, of twelve feathers. Tarsus longer than the middle toe, scutellated anteriorly. Toes large and strong, the outer and middle toe united as far as the first joint; claws strong, curved and sharp. Plumage slightly glossy. Sexes alike.

The genus *Corvus* includes many species of birds popularly known as Ravens, Crows, Rooks, and Jackdaws. They are mostly of large size, and usually of sombre colours; omnivorous as regards food, and with harsh voices. They pair for life, and build large basket-like nests of sticks in trees or on rocks, some of them in holes. With the exception of the Cape Black Crow, all the species lay bluish-green eggs more or less spotted and blotched with various shades of brown or olive-brown.

The Crows range over the whole of Europe, Africa, and North America, the greater portion of Asia, and a considerable part of Australasia.

Key to the Species.

- a. Plumage black and white. Bill stout and strong, curving rather abruptly towards the tip..... *C. scapulatus*.
- b. Plumage entirely black. Bill rather slender and straight, curving gently towards the tip..... *C. capensis*.

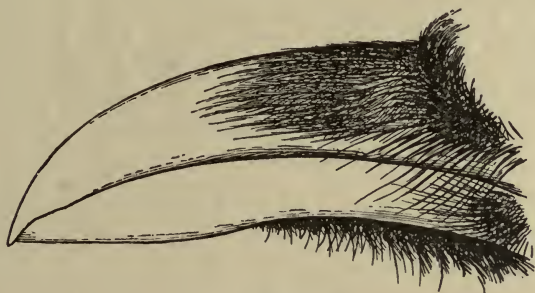
^{*albus*} 2. **Corvus scapulatus.** *Pied Crow.*

La Corneille à scapulaire blanc, *Levaill. Ois. d'Afr.* ii, p. 14, pl. 53 (1799).

Corvus scapulatus, *Daud. Traité*, ii, p. 232 (1800); *Gray, Gen. Birds*, ii, p. 315 (1847); *Layard, B. S Afr.* p. 168 (1867); *Gurney in Ander-*

sson's *B. Damara Land*, p. 154 (1872); *Sharpe, Cat. B. M.* iii, p. 22, (1877); *id. ed. Layard's B. S. Afr.* p. 416 (1884); *Holub and Pelzeln, Orn. Südafrikas*, p. 105 (1882); *Shelley, B. Afr.* i, p. 46 (1896).

"Bonte Kraai" (Beautiful Crow) of the Dutch Colonists.



Corvus scapulatus.

Description. Adult male.—Nape, mantle, sides of neck, entire breast, and inner axillaries white: all the remaining plumage black glossed with purple and steel-blue.

Iris hazel-brown; bill and feet black.

Length 18·00; wing 13·90; tail 7·90; tarsus 2·50; culmen 2·50.

Adult female.—Slightly smaller but similar in colour.

Young.—Many of the white feathers have dusky edges.

Distribution.—The whole of Africa to the south of the Sahara, including Madagascar. It is very generally distributed over Cape Colony, the Orange Free State and the Transvaal, but is somewhat local in Mashona, Matabili and Bechuana Lands, as well as in Great Namaqua and Damara Land. It is common in Upper Natal, but is not found on the coast.

Habits.—The Pied Crow, with its contrasting dress of black and white, is a handsome and conspicuous bird that generally attracts attention. It usually occurs in pairs, occasionally in small flocks. Like most of its tribe, it is omnivorous in its diet, at the same time it shows a decided partiality for animal food, and is always on the look out for carrion and offal of all sorts. In the neighbourhood of towns it is a haunter of slaughter-houses and refuse heaps, in the country it visits camps and outspans in search of scraps of meat or bones that may be thrown on one side. On the coast it visits the beach, turns over the seaweeds, picks up shell-fish or feeds on dead fish or whales left by the tide. At other times it visits cattle or

wild animals and frees them of various insect pests. There is indeed very little that this Crow will not eat.

Its usual note is a harsh croak, but, like many of the Crows, it has a singular variety of cries, especially in Spring, many of them sounding as if the bird were about to choke or was trying to call with its mouth full of food.

The nest, built in September in Cape Colony, is a large basket work of sticks and twigs lined with wool and other soft material. It is usually placed in a tree, but occasionally on the ledge of a krantz. The eggs, from four to six in number, are bluish-green, spotted and streaked, especially towards the larger end, with different shades of olive-brown. They measure 1.65×1.15 .

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Heterocorax

3. *Corvus capensis*. Black Crow.

La Corneille du Cap, *Levaill. Ois. d'Afr.* ii, pl. 52 (1799).

Corvus capensis, *Licht. Verz. Doubl.* p. 20 (1823); *Gray, Gen. Birds*, ii, p. 315 (1847); *Gurney in Andersson's B. Damara Land*, p. 155 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 370 (1882); *Shelley, B. Afr.* i, p. 46 (1896).

Corvus segetum, *Temm. Pl. Col.* (1828); *Layard, B. S. Afr.* p. 163 (1867).

Heterocorax capensis, *Sharpe, Cat. B. M.* iii, p. 12 (1877); *id. ed. Layard's B. S. Afr.* pp. 415, 845 (1884).

"Koren-land Kraai" (Corn-land Crow) of the Dutch.
South African Rook.

Description. *Adult male and female.*—Entirely black, glossed with purple on the back, wings, and under surface, with greenish on the quills.

Iris dark brown; bill and feet dark horn-colour.

Length 18.00; wing 13.80; tail 7.70; tarsus 2.70; culmen 2.50.

Young.—Browner and without gloss.

Distribution.—North-east, East, Central and South Africa. Birds from South-east and Central Africa being smaller, have been named *C. capensis minor* by Heuglin. In South Africa this Crow is locally distributed, being common in some localities, entirely absent from others. It is most abundant in Cape Colony, the Orange Free State, and Upper Natal. It does not visit the coast of Natal and is very irregularly distributed in the Transvaal and

Matabili and Mashona Lands. According to Andersson it is very common in Ondongo, but very local and nowhere common in Damaraland, becoming again more frequent in Great Namaqua Land.

Habits.—This species, the well-known “Koren-land Kraai” of the Dutch, is generally found in the neighbourhood of cultivated land, for, like the Rook in England, it is a constant follower of the plough for the sake of the worms and larvæ that are turned up; so much is this the case, that in Damara Land, where it is a comparatively recent immigrant, its appearance seems to have coincided with the first ploughing of the land by the natives. In addition to insects this Crow feeds upon grain and various small seeds, occasionally upon carrion. In western Cape Colony it is a constant attendant upon the cattle on the mountain pastures, apparently for the sake of the beetles and other insects obtained by turning over the dung. It is a noisy, clamorous bird, especially in Spring, when it appears to lose all control over its voice and gives vent to a curious variety of harsh, cracked, falsetto notes.



Corvus capensis.

The nest, usually built on a tree but occasionally on the ledge of a rock, is large, firmly constructed of dead sticks and twigs lined with rootlets, hair, wool and dry grass. The eggs, three to five in a nest, vary from buff to pink, thickly marked all over with small spots and dots of red, pink and brown. They are somewhat elongated ovates, averaging 2.25 by 1.20.

My friends, Messrs. Jupp and Ivy, of Grahamstown, inform me that in the valley of the Great Fish River this Crow plays the part of foster parent to the young of the Great Spotted Cuckoo (*Coccystes glandarius*).

Family II. STURNIDÆ.

Bill an elongated cone, moderately strong, the sides compressed, the culmen slightly curved or straight, the edges of both mandibles smooth or the upper one simply notched. Nostrils nearer the commissure than the culmen and not concealed by plumes or bristles. No rictal bristles. Tarsus scutellated anteriorly, covered by two smooth laminae posteriorly. Wings long and pointed, the first primary small. Tail of twelve feathers, long or short. Sexes nearly alike. Plumage of nestling usually streaked. One moult in the year.

The Sturnidæ are distributed over the greater portion of the Old World. They are generally gregarious; some are migratory, but the majority of the African species are more or less sedentary in their habits. They build in holes of rocks, buildings, and trees; a few, including the South African Wattled Starling, make open nests in bushes. They lay blue eggs, sometimes plain but often spotted. They are generally omnivorous as regards their food. Sixteen species and subspecies occur in South Africa, including two which may be very naturally placed in a different subfamily, Buphaginæ.

Subfamily I. BUPHAGINÆ.

Bill broad, moderately strong, the culmen slightly depressed and curved to the tip, which is entire; the sides of the lower mandible broad, the gonys short and ascending. Nostrils basal, small, and partly closed by a membrane. Wings long and pointed. Tail long and graduated, the end of each feather pointed. Tarsi short and strong. Toes moderately long, strong. Claws curved and sharp, the hind claw not as strong as the claw of the middle toe.

Genus I. BUPHAGA.

Type.

Buphaga, Linn. *Syst. Nat.* i, p. 154 (1766) *B. africana*.

Bill strong and broad at the base, the culmen depressed towards the base, swollen towards the extremity and curved to the tip, which is entire; the lateral sides of the lower mandible broad, projecting posteriorly, and rounded; the gonys moderately strong and curved upwards. Nostrils basal, lateral, the opening small and partly closed by membrane. Wings long and pointed; the first quill very

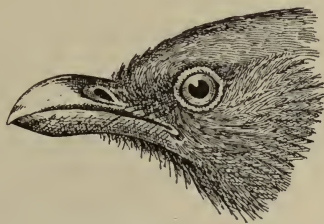
short, the second nearly as long as the third, which is the longest. Tail long, broad, and wedge-shaped; the end of each feather pointed. Tarsi as long as the middle toe, strong, scutellated anteriorly. Toes moderately long, strong, the lateral toes about equal, the outer united at the base, the inner free. Claws much compressed, curved and very acute, that of the middle toe more developed than that of the hind toe.

Only two species of this very distinct genus are known, both confined to Africa.

The Ox-peckers are of remarkable habits, obtaining nearly the whole of their food, consisting of ticks and other parasites, from the hides of the larger mammals, wild and domesticated; occasionally, when they find a sore, they eat the flesh and drink the blood of the animal itself. They are of social habits, have harsh notes, and are destitute of song. They perch on trees, seldom or never on the ground. Their nests are built in holes of trees and buildings, and they lay unspotted bluish-white eggs.

Key to the Species.

- a. Bill more robust; yellow at the base, red at the point. Inner web of tail-feathers rufous *B. africana*, p. 17.
 b. Bill less robust, entirely red. Inner web of tail-feathers dark brown *B. erythrorhyncha*, p. 20.



Buphaga erythrorhyncha.

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Buphaga africana
 4. *Buphaga africana*. Yellow-billed Ox-pecker.

Le Pique-Bœuf, *Briss. Orn.* ii, p. 437, pl. 42, fig. 2 (1760); *Levaill. Ois d'Afr.* ii, p. 198, pl. 97 (1800).

Buphaga africana, *Linn. Syst. Nat.* i, p. 154 (1766); *Gray, Gen. B.* ii, p. 332, pl. 82 (1847); *Layard, B. S. Afr.* p. 175 (1867); *Gurney in Andersson's B. Damara Land*, p. 163 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 109 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 418,

845 (1884); *id. Cat. B. M.* xiii, p. 195 (1890); *Millais, A Breath from the Veldt*, p. 65, 5 Illustrations (1895); *Shelley, B. Afr.* i, p. 41 (1896).

"Tick Bird" and "Rhinceros Bird" of English Colonists.

"Rhinaster Vogel" of the Dutch.

"Umblanda" of the Matabilis.

Description. Adult male.—Above, crown and upper surface of body brown, fading into buff-yellow on the rump and upper tail-coverts; wing-coverts like the back; quills and tail-feathers dark brown, the latter tinged with rufous on their inner webs; sides of face and neck brown, merging into buff-brown on the breast, and buff-yellow on the lower breast, abdomen and lower tail coverts; a patch of buff-red on the flanks; thighs brown; axillaries, under wing-coverts, and under surface of quills, dark brown.

Iris orange or red; in a specimen obtained by Andersson greyish-green; base of bill yellow, the terminal half red; feet dusky.

Length 8.40; wing 4.90; tail 4.00; tarsus 0.90; culmen 0.70.

Adult female.—Similar to the male in plumage.

Distribution.—The Ethiopian Region, excluding the forest districts of the West coast, Cape Colony, and the coast of Natal. It occurs sparingly in Upper Natal, but becomes more abundant in Zululand and to the northward, being fairly numerous in the Transvaal and thence to the Zambesi. It occurs also at Lake N'Gami, in Damara Land and in Benguela.

Habits.—This species is not so common near the coast of Natal and East Africa as the Red-billed Ox-pecker, and appears to follow the larger game in their retreat before civilised man. It more particularly favours the buffalo and rhinoceros with its company, and the majority of "big-game" hunters have noticed this partiality. Mr. Andersson remarks in his "Lake N'gami" that this bird "is also a frequent companion of the rhinoceros, to which, besides being of service in ridding him of many of the insects that infest his hide, it performs the important part of sentinel. On many occasions has this watchful bird prevented me from getting a shot at that beast; the moment it suspects danger it flies almost perpendicularly up into the air, uttering sharp shrill notes that never fail to attract the attention of the rhinoceros, who, without waiting to ascertain the cause, almost instantly seeks safety in a precipitate flight."

Mr. Ayres also writes, "This species is a pest to the hunter, of whose approach it warns the buffalo and rhinoceros by its loud harsh note, which is perfectly understood by its huge friends."

According to Mr. J. G. Millais, who gives a most excellent account of this species, accompanied by five drawings, in his delightful "A Breath from the Veldt," the Rhinoceros Bird attaches itself most frequently to the rhinoceros, the Cape buffalo, the sable antelope, and the wart-hog, as well as the koodoo. He writes, "The prehensile power of the claws is, as I found by experience, so great that when a dead bird which had grown stiff was thrown on to the back or sides of an ox so that the feet touched the animal's hide, the claws held fast at once, and could not be easily withdrawn. It is most interesting to notice the way in which a party of these birds will move about on the body of a horse or ox, searching every part of him as they run or hop over it in the most lively fashion. At the risk of being accused of telling a traveller's yarn, I must state the fact they can hop backwards quite as well as forwards, and they often make long drops downwards from the shoulders to the foreleg, or down the side of the animal whose coat they are engaged upon. It is quite immaterial to them how or in what direction they move."

When the Rhinoceros Birds wish to alarm an animal of the approach of danger, they rise for twenty or thirty feet and fly round in a series of small circles, uttering harsh scolding notes which much resemble those of the European Missel Thrush. On this signal a wild animal at once takes to flight, but an ox as a rule takes no notice, much to the indignation and horror of the birds, who sometimes become perfectly frantic in their endeavours to stampede the beast, flying wildly at his face and eyes while screaming their loudest. Curiously enough, all this alarm on the parts of the Ox-birds seems to be on account of the animal on whose hide they have been searching for food, for they themselves are among the tamest of birds, frequently allowing one to walk within a few paces of them without evincing any alarm whatever. These Starlings not only rid the animals they frequent of ticks and other vermin, but they often peck at sores on oxen and donkeys until they form cavities, which measure sometimes two inches or more in diameter and as much in depth; they actually do eat the flesh and drink the blood of these animals. Oxen submit quite placidly to this process of being eaten alive, and seem none the worse for it afterwards, but donkeys show their objections by trying to rid themselves of the birds by rolling on the ground and running under bushes.

The Yellow-billed Ox-pecker builds an untidy looking nest in

the natural hollow of a tree. On a foundation of straws and pieces of dried grass a thick pad of hairs is formed, and on this four or five very pale bluish-white eggs are deposited. They average 1.15×0.90 .

Buphagus
5. *Buphaga erythrorhyncha*. *Red-billed Ox-pecker.*

Tanagra erythrorhyncha, *Stanley in Salt's Voy. Abyss.* App. p. 59 (1814).

Buphaga erythrorhyncha, *Temm. Pl. Col.* ii, pl. 465 (1828); *Layard, B. S. Afr.* p. 175 (1867); *Holub and Pelzeln, Orn. Südaf.* p. 150, fig. (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 420, 846 (1884); *id. Cat. B. M.* xiii, p. 196 (1890); *Shelley, B. Afr.* i, p. 41 (1896).

"Tick Bird" of South African Colonists.

"Camel Bird" of the Somalis.

Description. Adult Male.—Above, crown and upper surface of body brown; lesser and middle wings-coverts like the back; rest of wing and tail-feathers darker brown; sides of face, neck, and throat brown shading into brownish-yellow on the breast and buff-yellow on the lower breast, abdomen and under tail-coverts; axillaries, under wing-coverts, and under surface of quills brown.

Iris red; bill entirely red; eyelids yellow; feet dusky-brown.

Length 8.50; wing 4.75; tail 4.10; tarsus 0.80; culmen 0.70.

Adult Female.—Resembles the male in plumage.

Young.—Duller than the adults in colour; the bill brown.

Distribution.—The greater part of the Ethiopian Region; but more abundant on the east coast. Not found in Cape Colony, Great Namaqua, or Damara Land, but occurs in Benguela. Very abundant on the coast of Natal, and gradually extending its range inland; equally common in Zululand and Portuguese East Africa, ranging northwards to Somaliland and Abyssinia. Somewhat local in the Transvaal and Rhodesia.

Habits.—The Red-billed is the common "Tick Bird" on the coast of Natal and East Africa, its place further inland being taken to a large extent by its congener, *Buphaga africana*. In the lower part of Natal it is resident, and in pastoral districts is nearly always to be seen in small flocks, either seated on the backs of oxen or horses, climbing, woodpecker-like, over their sides, or flying round them with harsh cries resembling those of the European Missel Thrush. Occasionally they perch on trees, seldom or never on the ground; Livingstone, however, states that he met with this species,

together with *Buphaga africana*, roosting in reeds in localities where neither wild nor tame animals were found ("Missionary Travels," p. 546). When seated on the back of an animal these Ox-peckers rest on the whole tarsus, with head thrown back and bill pointing upwards at an angle; if endangered by the sweep of their hosts' tail they flatten themselves still more and allow it to brush lightly over or jump nimbly out of the way. Their food consists almost entirely of ticks taken from the bodies of various animals, donkeys being special favourites. Should they, however, find an animal with a sore back they are apt to peck at and irritate the wounds, perhaps for the sake of the blood, which they drink as it oozes from the raw surfaces, but I have never known the Red-billed Ox-pecker eat out the deep holes that the yellow-billed species sometimes does. The same individual birds frequently attach themselves to particular animals. A donkey at Pinetown in Natal was constantly attended by four of these birds, who, in return for their services in keeping her free from ticks, were in the habit of drinking blood from sores which they kept open for that purpose behind the ears. Their nests also were lined entirely with hairs pulled from the donkey's coat; in collecting these the birds showed a certain amount of ingenuity, the individual hairs as they were pulled out being placed end to end on the donkey's back until neat bundles were accumulated, as large as they could conveniently carry; these were then carried to their nests under the roof of a house. In unsettled districts these birds build in the holes of trees, but in more civilised parts usually under the roofs of houses. The nest is an untidy structure of straw and grass lined with the hair of various animals. The eggs, three to five in number, are of a uniform pale bluish-white colour. They average 1.12×0.85 .

? Starling
Oxpeckers of
white throat
bright red
+ streaks
generally a
barbed or
starling
with afe
blades
full a
pinner
2
H/2

Subfamily II. STURNINÆ.

Bill variable, the culmen curved or straight to the tip, which is rather obtuse and flattened; nostrils basal, open, in a membranous groove. Wings moderate. Tail very variable. Tarsi rather long, strong, and scutellated anteriorly; the toes long and strong, the claws strong and sharp, that of the hind toe stronger than that of the middle toe.

Key to the Genera.

- a.* Plumage of the male and female the same or only differing slightly.
- a*¹. Plumage not glossy or metallic, or only slightly so.
- a*². Nasal aperture elongated. Old males in summer with wattles on the head..... *Dilophus*, p. 22.
- b*². Nasal aperture oval, in front of a groove.
- a*³. Outstretched feet fall short of tail end ... *Amydrus*, p. 26.
- b*³. Outstretched feet reach end of tail *Spreo*, p. 29.
- b*¹. Plumage highly glossy and metallic, with reflections of green, violet and purple.
- c*². Tail longer than the wing and much graduated *Lamprotorornis*, p. 31.
- d*². Tail shorter than the wing, graduated or square *Lamprocolius*, p. 34.
- b.* Plumage of male and female differing markedly; the male highly metallic, the female of plain colours without gloss *Pholidauges*, p. 43.

Genus I. **DILOPHUS.***Type.***Dilophus**, *Vieill. Anal.* p. 34 (1816).....*D. carunculatus*.

Bill long, straight and somewhat depressed at the base; the culmen curved, the sides compressed to the tip, which is emarginated; the gonys curved and ascending; the nostrils lateral and situated in a membranous groove with the opening rounded and exposed. Wings moderate, the first quill small, the second rather shorter than the third or fourth, which are equal and longest. Tail short and even. Tarsi longer than the middle toe, strong, covered in front with broad transverse scales; toes moderately strong, the outer rather longer than the inner and united at the base; the hind toe long; claws moderate, slightly curved and acute. In old males in summer the entire head and face bare of feathers, sometimes with erect fleshy wattles on the head and pendent lappets hanging from the bare throat. The females are always without wattles and lappets but have a space round the eyes and on each side of the throat without feathers. One species only belongs to the genus.

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*Creadophora*6. *Dilophus carunculatus*. Wattled Starling.*Gracula carunculata*, *Gen. Syst. Nat.* i, p. 399 (1788).Le Porte-Lambeaux, *Levaill. Ois. d'Afr.* ii, p. 178, pls. 193, 194 (1799).*Dilophus carunculatus*, *Rüpp. Syst. Uebers.* p. 76 (1845); *Gray, Gen. B.* ii, p. 336, fig. (1847); *Layard, B. S. Afr.* p. 177 (1867); *Gurney in Andersson's B. Damara Land*, p. 162 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 108 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 421, 845 (1884); *id. Cat. B. M.* xiii, p. 61 (1890); *Shelley, B. Afr.* i, p. 46 (1896).

"Locust Bird" of English Colonists.

*Dilophus carunculatus* (old male in breeding plumage).

Description. Old male in breeding plumage.—Entire head, face, and throat, bare of feathers; the skin bright yellow; two erect fleshy wattles on the crown, and a pendent lappet in the centre of the throat, black; entire body pale drab; wing-coverts lighter; primary coverts, quills, and tail-feathers black; under wing and tail-coverts pale drab.

Iris brown; bill yellow; feet flesh-colour.

Length 8·75; wing 4·75; tail 3·00; tarsus 1·20; culmen 1·00.

In the specimen figured the wattles are unusually large and well developed.

A younger, or less developed male, has a space behind and below the eyes and on each side of the throat bare of feathers and of a bright yellow colour, the rest of the head and face covered with whitish feathers, through which the black wattles project. Comparatively few males have wattled heads; probably this peculiarity is confined to old males during the breeding season.

Adult female.—Is browner than the male; the rump white; upper tail-coverts brown; head feathered and coloured like the back, only a space round the eye and on each side of the throat being bare of feathers; entirely without wattles or neck lappets.

Young.—In first plumage resemble the females.

Distribution.—Nearly the entire Ethiopian Region, including Southern Arabia; at times appearing in nearly every district in South Africa, but subject to irregular migrations, depending upon the supply of food, which consists largely of locusts at various stages of growth.

Habits.—The well-known "Locust Bird" is of gipsy-like habits, migrating here and there without much regard to season, and frequently appearing suddenly in a district for several days or weeks in flocks numbering tens of thousands, to disappear as suddenly, often for many years. These Starlings are in fact so largely dependent for food upon the migrating swarms of locusts that they are compelled to remain in touch with these insects for the greater portion of the year. A few stray individuals occasionally remain for a time after the larger flocks have taken their departure, and find an asylum in the ranks of the resident Red-winged or Brown and White Starlings, with both of which species they are on amicable terms. In September, 1869, Layard found these Locust Birds breeding in vast numbers on the Berg river, about eighty miles from Cape Town, their nests filling many bushes, but they do not appear to have visited this district since that date. In the same year they bred near Bedford.

Mr. Ayres says that "they are only found at Potchefstroom during the winter months, from April to November, when they occur both singly and also in companies ranging in number from three up to a hundred or more."

When pursuing a flight of mature locusts these Starlings perform various extraordinary and beautiful aerial evolutions with the object of intercepting and surrounding a portion of the swarm, and in doing this their movements closely resemble those of another locust-destroying Starling, the beautiful Rose-coloured

Pastor of Eastern Europe and Asia. Individually the two species are very different, collectively and under similar conditions their actions are quite similar. Starting in a dense "ball-like" mass, they suddenly open out into a fan-shaped formation, then assume a semi-circular arrangement, and finally end by forming a hollow cylinder in which a portion of the locusts are enclosed; as the imprisoned insects are destroyed, the Starlings gradually fill up the hollow of the cylinder until they again assume their "ball" formation and proceed to follow the remaining locusts. The ground below the flock is covered with the droppings of the birds and the snipped-off legs and wings of locusts. At other times the Starlings station themselves on the tops of bushes and trees, from which they dart on the flying insects like Flycatchers. When feeding on the ground, on the young locusts, they advance in long lines, three or four deep, the rearmost birds constantly jumping over those in front of them, like English Starlings. When locusts are not to be had the Wattled Starling will eat almost any variety of insect food, but seem to prefer grasshoppers and small beetles; occasionally they feed upon berries and seeds.

In Cape Colony the Locust Birds usually breed in very large colonies, in localities in which the locusts have deposited their eggs. For hundreds of yards every thorny bush is packed full of cup-shaped nests, even the spaces between the nests being often filled up with sticks or rubbish, through which narrow passages are left for the ingress and egress of the birds. Many Starlings that can find no room in the bushes, build on the ground, or under stones, or in holes, and these unfortunates, together with their eggs or young, ultimately become the victims of the smaller carnivorous mammals or of snakes. It frequently happens also that either the young locusts are hatched in insufficient numbers or that they migrate before the young Starlings are fledged. In either case large numbers of birds perish of hunger, the majority of the old birds and the more advanced young following the locusts. Four or five eggs are laid, usually in August or September; these are of a very pale blue colour, sometimes with a few specks of black at the larger end, but usually unspotted. They are rather pyriform in shape, and average 1.20×0.90 .

Genus II. **AMYDRUS.***Type.***Amydrus**, *Cabanis, Mus. Hein.* i, p. 201 (1850) *A. morio*.

Bill elongated, cone-shaped, broad at the base, compressed from side to side near the tip; culmen curved from base to tip; nostrils oval, pierced in a membrane towards the anterior end of a groove. Wing: first primary one third the length of the second, which equals the fifth; the third and fourth equal and slightly longer. Tail long, but somewhat shorter than the wing, graduated or square; the outstretched feet fall short of its end. Tarsus robust, front toes long and rather slender, hind toe stronger, claws curved and sharp, especially the hinder. Plumage slightly glossy, the wing-quills orange-chestnut, or buff and chestnut with black tips, in South African species. Sexes alike or nearly so.

This genus includes five species distributed over South, East and North-east Africa. They frequent rocky localities and feed on insects, berries and fruit.

Key to the Species.

- a. Wing 6·25; quills orange-chestnut with black tips; tail 5·75, graduated *A. morio*, p. 26.
 b. Wing 5·40, quills buff with black tips, the outer webs of the outermost only chestnut; tail 4·60, square..... *A. caffer*, p. 28.

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7. Amydrus morio. *Red-winged Starling.*

Turdus morio, *Linn. Syst. Nat.* i, p. 297 (1766).

Le Roupenne, *Levaill. Ois. d'Afr.* ii, p. 134, pls. 83, 84 (1801).

Juida morio, *Gray, Genera B.* ii, p. 327 (1846); *Layard, B. S. Afr.* p. 173 (1867).

Amydrus morio, *Cabanis, Mus. Hein.* i, p. 201 (1850); *Holub and Pelzeln, Orn. Südafr.* p. 112 (1882); *Butler, Feilden and Reid, Zoologist*, 1882, p. 256; *Sharpe, ed. Layard's B. S. Afr.* pp. 431, 846 (1884); *id. Cat. B. M.* xiii, p. 161 (1890); *Shelley, B. Afr.* i, p. 44 (1896).

“Red-winged Spreeuw.” “Rooivlerk” (Redwing) of the Dutch.

Description. Adult male.—Above, with the scapulars and lesser wing-coverts, glossy blue-black with violet reflections; other coverts glossy black with greenish-blue reflections; secondaries blue-black; primaries orange-chestnut, tipped and partly edged on the inner web with black; tail black glossed with steel-green; entire head

glossy black with reflections of blue and steel-green ; under surface of body, axillaries and under wing-coverts blue-black ; the abdomen without much gloss ; under surface of wing-quills orange-chestnut with black tips.

Iris dark brown with an outer circle of crimson ; bill and feet black.

Length 12·00 ; wing 6·25 ; tail 5·75 ; tarsus 1·30 ; culmen 1·15.



Amydrus morio.

Adult female.—Like the male, but the head, neck, throat and chest are grey streaked with black.

Young.—Duller in colour and without gloss.

Distribution.—South, East, Central and North-east Africa. Resident, or only subject to local migrations, in most parts of Cape Colony, Natal, the Orange Free State and the Southern Transvaal. It frequents both the coast and the interior, being most abundant in rocky and mountainous localities. It has not been recorded from Great Namaqua or Damara Land.

Habits.—This common and well-known species remains in flocks all the year round and usually breeds in colonies but occasionally in single pairs. Their presence is easily recognised by their loud, prolonged and musical whistling note which is constantly uttered both during flight and when at rest. On the wing they are as readily distinguished by their bright chestnut wing-quills and wedge-shaped tails, the females by their greyish heads. During the greater portion of the year these Starlings feed upon larvæ and insects, but during the fruit season they devour grapes, figs and other soft fruit. They are in consequence not looked upon with a favourable eye by farmers and fruit growers. I have seen them catch mature locusts on the wing as well as flying termites, and on

one occasion I noticed a pair devour the callow young of a Cape Sparrow notwithstanding a sturdy defence by the parent birds. On the coast the Red-wing frequents the beach and searches the seaweed for sandhoppers and small molluscs; berries of various kinds are habitually eaten, especially those of the syringa-tree, on which they sometimes gorge themselves until they are no longer capable of flight, or perhaps are affected by some narcotic property of the berry itself.

These Starlings build their nests of small sticks, straws and various soft materials, in the holes and crevices of rocks and krantzies, sometimes among the rocks on the beach just out of reach of the waves, occasionally under the roofs of houses. The eggs, four or five in number, are bluish-green, somewhat sparingly marked, chiefly at the larger end, with spots of reddish-brown. They average 1.45×0.95 .

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Pyrrhocheira caffer caffer
8. Amydrus caffer. *Pale-winged Starling.*
West Indian

Coracias caffra, Linn. *Syst. Nat.* i, p. 159 (1766).

Le Nabouroup, *Levaill. Ois. d'Afr.* ii, p. 168, pl. 91 (1800).

Juida fulvipennis (Sund.) *Layard, B. S. Afr.* p. 173 (1867).

Amydrus caffer, Gurney in *Andersson's B. Damara Land*, p. 162 (1872);
Sharpe, ed Layard's B. S. Afr. pp. 430, 846 (1884); *Shelley, B. Afr.*
 i, p. 44 (1896).

Pyrrhocheira caffer, *Sharpe, Cat. B. M.* xiii, p. 169 (1890).

Description. *Adult male.*—The entire body, above and below, also the scapulars and lesser and middle wing-coverts, blue-black glossed with purple; head and throat rather greener; greater coverts, primary coverts, bastard wing and secondaries black, bronzed with purple and green; primaries buff-white at the base for three-fourths their length, black at the ends, the outer ones with the outer webs chestnut; tail black with greenish reflections.

Iris orange-red; bill and feet black.

Length 10.00; wing 5.40; tail 4.60; tarsus 1.15; culmen 0.90.

Adult female.—Resembles the male in plumage.

Distribution.—South-western Africa: on the west coast in Little and Great Namaqua and Damara Lands, extending into Mossamedes, where it is abundant near the coast according to Anchieta. In Cape Colony it is not found near Cape Town, but occurs in the Prince Albert division at Aasvogelberg, is abundant at Nel's Poort and

L. caffer var. deserticola Karroo Redwing St.

elsewhere in the Karroo, also near Colesberg and at Kakamas on the Orange River. It also occurs in the Orange Free State, but is somewhat local and scarce.

Habits.—This species is more restricted in its distribution, but frequents much the same localities as the common Red-winged Starling, which latter bird it also resembles in its general habits. The two species are sometimes found together, as at Nel's Poort, near Beaufort West, but, according to Layard, they do not mix in the same flock, and the present is easily distinguished during flight by its square tail as well as by the pale colour of the under side of the wing.

Dr. Bradshaw remarks that this Starling is "rather numerous about Kakamas," on the Orange River, "not seen anywhere else, not even at Upington, only seventy miles away along the river."

Andersson says: "This is a tolerably common bird in Damara Land and in the adjacent countries to the north and east, as well as in Great and Little Namaqua Land. It is gregarious in its habits, congregating in small flocks, and is partial to rocky localities; it sometimes flies at a considerable height, and frequents the water morning and evening. It feeds on seeds, berries, insects, &c."

The Pale-winged Starling builds its nest in the crannies of rocks, of straws, dried grasses and various soft materials. The eggs, three to five in number, are smaller than those of the Red-winged Starling as well as somewhat paler in colour, with smaller markings. They measure about 1·20 by 0·80.

Genus III. SPREO.

Type.

Spreo, *Lesson, Traité*, p. 407 (1831)S. bicolor.

Bill, nostrils and wing as in *Amydrus*. Tail short and square, the outstretched feet reaching to its end. Plumage slightly metallic. Sexes alike.

Six African species are included in the genus, one being confined to South Africa. They feed chiefly on insects, and follow cattle and sheep for the sake of ticks and other parasites. In their general habits they closely resemble the European Starling (*Sturnus vulgaris*).

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9. *Spreo bicolor*. *Pied Starling*.

Turdus bicolor, *Gm. Syst. Nat.* i, p. 385 (1788).

Le Spréo, *Levaill. Ois. d'Afr.* ii, p. 155, pl. 88 (1800).

Spreo bicolor, *Less. Traité*, p. 407 (1831); *Gurney in Andersson's B. Damara Land*, p. 161 (1872); *Holub and Pelzeln, Orn. Südafr.* p. 112 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 429, 846 (1884); *id. Cat. B. M.* xiii, p. 187 (1890); *Shelley, B. Afr.* i, p. 44 (1896).

Juida bicolor, *Gray, Gen. B.* ii, p. 327 (1846); *Layard, B. S. Afr.* p. 172 (1867).

Pied Starling and White-rumped Starling of the English.

Witgat (White-vent) and Witgat Spreeuw of the Dutch.



Spreo bicolor.

Description. Adult male.—Head, body, and wings, brown, with reflections of bronze-green in certain lights; lower abdomen and under tail-coverts white. Tail bronze-green above, brown below.

Iris pale yellow; bill black, the base, and a small wattle at the gape, yellow; feet black.

Length 10·25; wing 5·75; tail 4·20; tarsus 1·45; culmen 0·90.

Adult female.—Resembles the adult male in plumage.

Young of the year.—The base of the bill is buff-colour, and there is no wattle at the gape.

Distribution.—Confined to South Africa: it is somewhat locally distributed over Cape Colony, the Orange Free State, and Upper Natal, but is not found on the coast of the latter country. It ranges over the Southern Transvaal, but becomes rarer towards the north; and although it occurs in the Lake N'Gami district, it has not been recorded from Great Namaqua or Damara Land.

Habits.—This Starling is an abundant and well-known species in many parts of South Africa, but from some districts is

unaccountably absent. Although very common at Mossel Bay and Port Elizabeth, it is, according to Rickard, not found at East London. Of social habits, the Brown and White Starling remains in flocks all the year round. It is nearly always to be found in the neighbourhood of outspans and cattle pastures, where it may be constantly seen perched on the backs of sheep and oxen, engaged in ridding these animals of ticks and other vermin; but probably the bulk of its food, consisting of grubs, beetles and other insects, is obtained from the ground. During the greater part of the year it feeds almost entirely on insects, very rarely taking a few small seeds, but in the fruit season it eats grapes and figs as well as other fruit, and as a result incurs the enmity of the gardener and fruit grower. The ordinary call-note of this Starling is a fairly loud and rather prolonged whistle. In Spring it indulges in a broken and somewhat chattering song, which is not unlike that of the European Starling.

As a rule they build their nests at the ends of holes excavated by themselves, to the depth of from two to ten feet, in the banks of rivers or dongas, but frequently they take possession of holes in walls or under the eaves of farmhouses, and sometimes even build on the ground under stones or rocks. At Saldanha Bay I noticed them building in crevices in the sea-cliffs, and found several colonies nesting in the sides of old wells, at some distance below the surface of the ground. Andersson states that they frequently take forcible possession of the nests of other birds, such as the Woodpecker, Bee-eater, and Swallow. The nest is an untidy collection of straws and dry grass with a central pad of softer material—as hair, wool, or feathers.

The eggs, from two to six in number, are of a bright blue colour, usually plain, but occasionally marked with a few spots of reddish-brown. Their average size is 1.15×0.85 . In Cape Colony they are laid in August or September.

Genus IV. LAMPROTORNIS.

Type.

Lamprotornis, *Tenm. Man. d'Orn. i*, p. 11 (1820)*L. caudatus*.

Bill moderately long, more or less slender, the sides compressed, the culmen slightly curved to the tip, which is emarginated; the gonys long and slightly ascending; the nostrils basal, lateral, oval, and exposed. Wings moderately long and pointed; the first primary

short, the second shorter than the third, fourth or fifth, which are longest. Tail long, longer than the wing, and much graduated. Tarsi strong, scutellated anteriorly. Toes rather long, strong; the outer longer than the inner, the hind toe long and strong. Claws strong, sharp and slightly curved. Plumage highly glossy and metallic, "shot" with reflections of deep green, violet, purple, golden-bronze and copper colour. Irides brown. Sexes nearly similar.

The Long-tailed Glossy Starlings, six species in all, are confined to Africa. Two species come within our northern limits. But little is known of their habits, but they appear to resemble those of the better known Short-tailed Glossy Starlings.

Key to the Species.

- a. Crown violet; back blue glossed with violet; throat and chest violet *L. mevesi*, p. 32.
- b. Crown and back golden-bronze with violet reflections; throat and chest purple with reflections of violet *L. purpureus*, p. 33.

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long tailed

10. **Lamprotornis mevesi.** *Meve's Glossy Starling.*

Juida mevesi, *Wahlb. Jour. f. Orn.* 1857, p. 1; *Gurney in Andersson's B. Damara Land*, p. 159 (1872).

Lamprotornis mevesi, *Hartl. Jour. f. Orn.* 1859, p. 12; *Bocage, Orn. Angola*, p. 303 (1881); *Holub and Pelzeln, Orn. Südaf. p.* 110 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 423, 846 (1884); *id. Cat. B. M.* xiii, p. 157 (1890); *Shelley, B. Afr.* i, p. 42 (1896).

Description. Adult Male.—Above, the covered portion of all the feathers dull slate-black, the visible portion glossed with reflections of blue and violet on the head and neck, with violet and copper-colour on the back, the lesser wing, and upper tail-coverts; the remaining wing-coverts and quills bronzed with blue, violet and green; the long and much graduated tail bluish with violet reflections, the feathers crossed by numerous narrow black bars only visible in certain lights; below, the feathers with sooty-black bases, glossed, on the throat and chest with violet, on the abdomen and under tail-coverts with copper-colour; the under tail-coverts washed with blue; axillaries and under wing-coverts dusky, glossed with violet on the outer margins.

Iris brown; bill and feet black.

Length 12·00 to 13·00; wing 5·15; tail 7·50; tarsus 1·45; culmen 0·70.

Adult female.—Somewhat smaller and with a shorter tail, also slightly duller in plumage.

Young.—Without coppery gloss on the under surface of body; the back greener and without violet reflections; and generally duller in plumage.

Distribution.—This beautiful long-tailed Glossy Starling was discovered by Wahlberg in Damara Land in 1856, and obtained by Andersson in the same country eleven years later. It ranges northward into Mossamedes, and eastward along the valleys of the Cunéné and Zambesi Rivers. To the south of the latter river it has been procured on the Mata River by Frank Oates, and at Sibanani by Dr. Holub. North of the Zambesi it occurs in Barotse-land and Nyasaland. In the latter country it has been met with both by Mr. Whyte and Mr. Alfred Sharpe.

11. *Lamprotornis purpureus*. *Purple Long-tailed Starling*.

Lamprotornis purpurea, *Bocage, Journ. Lisb.*, 1867, p. 334 (1867); *id. Orn. Angola*, p. 305, pl. 7. (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 423 (1884); *id. Cat. B. M.* xiii, p. 158 (1890); *Shelley, B. Afr.* i, p. 42 (1896).

“Melombeangansa,” natives of Mossamedes.

Description. Adult male.—Above glossy golden-bronze with violet reflections; forehead and lores blackish; crown like the back; scapulars and lesser wing-coverts glossy purple with violet reflections, the feathers tipped with golden-bronze; secondaries glossed with violet and purple and barred with dusky; primaries blackish; tail-feathers glossed with violet and purple and cross-barred with dusky; throat and breast glossy purple with reflections of violet shading into golden-bronze on the abdomen.

Iris brown; bill and feet black.

Length 14·00; wing 6·00; tail 8·40; tarsus 1·50; culmen 0·90.

Adult female.—Resembles the male in plumage.

Young.—Much duller in colour; generally of a dusky brown with violet reflections.

Distribution.—Benguela and northern Ovampo Land. Anchieta collected this beautiful Starling on the Rio Chimba, and at Quillengues and Capangombe, in Benguela. I have seen several specimens

from Huilla, to the north of the River Cunéné, and obtained three from a German collector, Herr Smidt, killed on the south bank of that river.

Genus V. **LAMPROCOLIUS.**

Type.

Lamprocolius, *Sund. Cefv. K. Vet.-Akad.*

Förh. Stockh. 1836, p. 104 *L. phœnicopterus*.

Bill moderate, more or less slender, the culmen curved to the tip, which is emarginated, the sides compressed, the gonys long and slightly ascending. Nostrils basal, lateral, exposed and oval, the feathers approaching but not concealing the opening. Wings moderately long and pointed, the first quill short, the second rather shorter than the third, fourth, or fifth, which are about equal and longest. Tail equal to, but generally shorter than the wing, nearly square, slightly rounded, or graduated. Tarsi about as long as the middle toe, robust, scutellated anteriorly; toes rather long, strong and scutellated, the outer longer than the inner, the hind toe long and strong; claws strong, short and slightly curved. Sexes alike. Plumage very glossy and metallic, with reflections of green, blue, violet and purple.

The genus *Lamprocolius* contains fifteen species of Glossy Starlings: its range is strictly Ethiopian. They are very social in their habits and feed in flocks, on berries and small fruits which they obtain from bushes and trees, and on various insects which they search for on the ground. They are somewhat noisy birds, with usually loud and harsh notes. They build in holes of trees, occasionally in buildings, and lay four or five eggs of a pale bluish-green colour, sparingly spotted with reddish-brown.

Key to the Species.

a. Tail much graduated.

*a.*¹ Larger; wing 6·80—7·50; tail 5·75—6·70; irides

hazel *L. australis*, p. 35.

*b.*¹ Smaller; wing 5·00; tail 4·45—5·00; irides

yellow *L. acuticaudus*, p. 37.

b. Tail square or slightly rounded.

Irises orange or yellow.

*c.*¹ Tail deep oil-green.

*a.*² Breast, abdomen and flanks deep oil-green.

Wing-spot copper-colour glossed with purple
and violet.

crossed by numerous but nearly invisible bars of darker brown and bronzed with blue; primaries dark brown bronzed with blue and green, especially on the outer webs; abdomen glossed with purple, blue and violet, the flanks with blue and green; vent and thighs black, the thighs slightly bronzed with blue; under tail-coverts glossed with violet and purple; axillaries and under wing-coverts black bronzed with purple and blue.

Iris hazel; bill and feet black.

Length 14.00; wing 7.50; tail 6.70; tarsus 1.85; culmen 1.00.

Adult female.—Like the male in colour, but much smaller. Length 10.50; wing 6.80; tail 5.75.

Distribution.—From the neighbourhood of Colesberg, in Cape Colony, through the Orange Free State and the Transvaal into Bechuana, Matabili, and Mashona Lands, thence through the Lake N'Gami district, where it abounds, according to Andersson, into Angola. It is one of the commonest birds at Humbé as Anchieta states.

Habits.—This large and very beautiful Glossy Starling appears to be everywhere rather shy in its habits, much more so than are the majority of its congeners. In the Northern Transvaal, where it abounds in certain favourite localities, usually where there are a good many trees and bushes growing on the banks of rivers, it may be frequently seen feeding on the ground in flocks, often in the company of *Lamprocolius bispecularis*. It is at once distinguished from the latter species not only by its greater size, larger wings, and longer tail, but by its much heavier and more laboured flight. Burchell's Starling is a lively bird, vivacious in all its actions, constantly flitting its tail, frequently carrying it at right angles to its body as if to show off its glossy plumage to the greatest advantage. Its notes are loud, harsh and clamorous. Like all the Glossy Starlings it is omnivorous as regards food, feeding largely on berries and fruit, but also on insects, including locusts and termites; Anchieta remarks that, in Angola, this species "feeds on fruit and termites." It obtains its food both from trees and on the ground; Sir Andrew Smith says "from high trees exclusively," but he made this observation after having seen these birds on one or two occasions only in a particular locality.

Mr. Buckley states in his "Birds observed during a journey to Matabililand" (*Ibis*, 1874, p. 378) that these Starlings, at the time of his visit in June, 1873, were building under the eaves of the houses in Pretoria. More usually they breed in the holes of trees,

frequently at a considerable height above the ground. The nests consist of a quantity of dry grass and straw lined with hair, wool and finer grass. The eggs are usually four in number, bluish-green, sparingly marked with spots of pale reddish brown. They measure 1·36 by 0·95.

851 *Heteropsar*

Ponded

13. **Lamprocolius acuticaudus.** *Sharp-tailed Glossy Starling.*

Lamprocolius acuticaudus, *Bocage, Journ. Lisb.* 1870, p. 345; *id. Orn. Angola*, p. 309, pl. 6 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 427 (1884); *Shelley. B. Afr.* i, p. 43 (1896).

Heteropsar acuticaudus, *Sharpe, Cat. B. M.* xiii, p. 185 (1890).

"Eiabairo" of Caconda natives (Anchieta).



Lamprocolius acuticaudus.

Description. *Adult female* (Okavango River).—Above glossy oil-green; wing-coverts and outer webs of quills like the back, the edge of wing glossed with violet and copper-colour, the primary coverts with blue, some of the middle coverts with a black terminal or subterminal spot; central tail-feathers green like the back, the outer with their inner edges dull black; crown like the back; lores, eyelids and feathers below eye black; ear-coverts glossy blue; under surface of body glossy oil-green, shot with bluish on the lower breast, abdomen and flanks; axillaries and under wing-coverts black, glossed with violet and purple; under surface of tail and wing-quills blackish.

Iris orange-yellow; bill and feet black.

Length 9·00; wing 5·00; tail 4·45; tarsus 1·05; culmen 0·90.

The tail graduated, the centre feathers 0·75 longer than the outer.

Adult male.—Resembles the female in colour, but is slightly larger, and has a longer tail.

Length 10·00; wing 5·10; tail 5·00; tarsus 1·10; culmen 0·90.

Distribution.—Southern Angola and Ovampoland; abundant on the plateau and among the mountains of Huilla to the north of the Cunéné River, ranging south into Ovampoland and to the Okavango River (Erickson).

Habits.—Anchieta states that it feeds principally on fruits.

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14. *Lamprocolius phœnicopterus*. *Red-shouldered Glossy Starling*. Cape

Le Naborôp, *Levaill. Ois. d'Afr.* ii, p. 157, pl. 89 (1800).

Lamprotornis phœnicopterus, *Swains. An. in Menag.* p. 360 (1837).

Juida phœnicoptera, *Gray, Gen. B.* ii, p. 326 (1846); *Layard, B. S. Afr.*, p. 171 (1867).

Lamprocolius phœnicopterus, *Bp. Consp.* i, p. 416 (1850); *Sharpe, ed. Layard's B. S. Afr.* pp. 425, 846 (1884); *id. Cat. B. M.* xiii, p. 180 (1890); *Shelley, B. Afr.* i, p. 43 (1896).

Description. Adult male.—Above, deep glossy oil-green, with purplish reflections on the occiput and back of neck; the back, rump, and upper tail-coverts glossed with steel-blue; wing-coverts glossy oil-green, some of the innermost lesser and the middle coverts brilliant copper-colour encircled with purple and violet, the middle and greater coverts tipped with steel-blue and with a penultimate spot of black; quills glossy oil-green on the outer webs; tail-feathers oil-green glossed with blue; lores and feathers round the eyes black; ear-coverts black glossed with violet; throat glossy steel-blue and green; rest of under surface glossy oil-green; thighs black glossed with violet; under tail-coverts bronzy oil-green; axillaries and underwing-coverts glossy purple, blue and green; under surface of wing and tail-feathers black.

Iris orange-yellow; bill and feet black.

Length 10·50; wing 5·80; tail 4·00; tarsus 1·45; culmen 1·00.

Adult female.—Resembles the male in plumage but is somewhat duller in colour.

Distribution.—Confined to Cape Colony to the east of the Gamtoos River, probably ranging into the south of the Orange Free State.

Habits.—In many districts of Eastern Cape Colony this species of Glossy Starling is very common and well-known, being often met with in considerable flocks. It is most numerous in the bush and forest districts, where it finds an abundant supply of small fruits

and berries, as well as a variety of seeds and insects. I have frequently seen this Starling catching the winged termites as they issued from the ground. It is a bird of lively habits, frequently taking short flights and returning to its perch, and constantly uttering its loud, mellow notes, varied at intervals with a short song which depends for its merit a good deal on the individual performer, and is not unlike that of the English Starling. Small parties of these Glossy Starlings are often to be seen sitting on the tops of high trees, their metallic green and copper-coloured plumage glistening in the sun, and recognisable at a distance by their bright orange-yellow irides. In Spring the winter flocks separate into pairs, which distribute themselves through the bush in search of a convenient hole in which to place their nest. Usually they make use of a natural hole or cavity in a tree-trunk, but sometimes take possession of one dug by a woodpecker after driving away the rightful owners. Not unfrequently they build under the eaves of a barn or house, and Mr. Barratt remarks that, on his farm on the Chalumna, British Kaffraria, they "frequented the barns and buildings, continually flying to and fro, like English Starlings." The nest holes are thickly lined with dry grass, feathers, and hair, on which four or five eggs are laid. These are usually somewhat elongated in shape, of a pale bluish-green ground colour, sparingly spotted with pale reddish-brown. They average about 1.10×0.80 .

15. *Lamprocolius phœnicopterus bispecularis*.

Lesser Red-shouldered Glossy Starling.

Spreo bispecularis, Strickl. Contr. Orn. 1852, p. 149.

Juida decorata, Layard, B. S. Afr. p. 171 (1867).

Lamprocolius phœnicopterus, Gurney in Andersson's B. Damara Land, p. 160; Sharpe, ed. Layard's B. S. Afr. pp. 425, 846 (partim) (1884).

Lamprocolius phœnicopterus, subsp. a. *bispecularis*, Sharpe, Cat. B. M. xiii, p. 181 (1890).

Description. *Adult male*.—Similar to the male of *L. phœnicopterus*, but distinctly smaller; the wings and back steel-green instead of oil-green in colour. Iris orange; bill and feet black.

Length 8.20; wing 5.00; tail 3.50; tarsus 1.20; culmen 0.70.

This race replaces the true *L. phœnicopterus* in Natal, Zululand, the Orange Free State, the Transvaal, Swaziland and Portuguese East Africa. It was found by Dr. Holub in West Matabililand and

in East Bamangwato, by Mr. Andersson in Damara Land, and by S. Anchieta in Mossamedes and Angola.

Habits.—In its habits this race does not differ from the larger *L. phœnicopterus*. Mr. Andersson remarks: "This bird is found most abundantly throughout Damara and Great Namaqua Land, in the valleys of the Okavango and of the Teoughe, and in the Lake regions. Like our European Starling, which it very much resembles in manners and habits, it frequently congregates in large flocks; it is comparatively tame and easy to approach, and is often met with near villages. Its food is very various, consisting of berries, seeds, and insects, and it is very destructive to fruit gardens; its flesh is not unpalatable. This species forms its nest in the hollows of trees, lining the cavity well with feathers. The eggs are four in number, of a long oval shape, but tapering much more at one end than at the other; they are of a pale bluish-green, spotted all over with small dots of light brown."

Mr. T. Ayres writes, that in Natal "these birds are generally to be found from three to a dozen together, sometimes more, excepting in the spring, when they pair off. They build in holes in the trunks of trees, generally at a good height from the ground. I have known a pair of these birds take possession of a Woodpecker's nest, destroying the eggs, and laying their own instead, which the Woodpeckers seemed to submit to rather tamely. They feed almost entirely on fruits and berries, and are destructive to our mulberries and other small fruits. They sometimes hop about and feed on the ground, somewhat like the Thrush and Blackbird in England."

847 16. *Lamprocolius chloropterus*. ^{*Western*} *Green-winged Glossy Starling*.

Lamprotornis chloropterus, *Swains. An. in Menag.* p. 359 (1837).

Lamprocolius chloropterus, *Bp. Cousp.* i, p. 416 (1850); *Heugl. Orn.*

N. O.-Afr. ii, p. 512 (1870); *Sharpe, Cat. B. M.* xiii, p. 178 (1890);

Shelley, B. Afr. i, p. 43 (1896).

Description. *Adult male.*—Above, upper back and scapulars glossy steel-green; lower back, rump and upper tail-coverts steel-blue glossed with green; wing-coverts like the back, with a sub-terminal spot of black on the middle and greater coverts; on the bend of wing a patch of bluish-purple formed by the inner lesser-coverts; bastard-wing, primary-coverts and quills black, externally steel-green, the secondaries with a terminal black spot; tail violet

glossed with greenish; crown steel-blue; ear-coverts deep blue; lores black; cheeks, throat and chest glossy steel-green; lower breast and abdomen, thighs and flanks purplish; axillaries and under wing-coverts purplish. Iris golden-yellow; bill and feet black.

Length 8·35; wing 4·75; tail 2·75; tarsus 1·20; culmen 0·75.

Distribution.—On the west coast of Africa from Gaboon to Senegambia, ranging across Central into North-east Africa, where it is very common. It occurs in Abyssinia and breeds in Shoa, according to Antinori. It reaches as far north as lat. 20°. It is not very common in German East Africa, but occurs as far south as the delta of the Zambesi, where Sir J. Kirk obtained specimens at Tete.

Habits.—This species resembles its congeners in habits. It is generally found in flocks, large or small, but occasionally in pairs. It is active and vivacious in its movements, runs with rapidity on the ground and occasionally hops. It feeds on seeds, fruit and insects, both on the ground and among bushes and trees. Its note is, for a glossy Starling, rather soft and not unmusical, a long-drawn-out krā-āh, krā-āh. Its golden-yellow irides are very conspicuous during life.

Eastern
17. **Lamprocolius sycobius.** *Peter's Glossy Starling.*

Lamprocolius sycobius, *Licht. Nom. Av. Berol.* p. 53 (1854); *Holub and Pelzeln, Orn. Südafrikas*, p. 110, pl. 3 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 426 (1884); *id. Cat. B. M.* xiii, p. 178 (1890); *Shelley, B. Afr. i*, p. 43 (1896).

"Iqueeze" of the Matabilis.

Description. Adult male.—Differs from the male of *L. phœnicopterus* in being much smaller and in lacking the purple and violet gloss on the occiput and nape, also in having the head glossy oil-green with coppery reflections, the inner lesser wing-coverts more violet and less copper-coloured in shade.

Iris golden yellow; bill and feet black.

Length 8·00; wing 4·85; tail 3·30; tarsus 1·10; culmen 0·90.

Adult female.—Resembles the male in colour.

Distribution.—From the Central Transvaal through Rhodesia, Nyasaland and Mosambique to Mombasa; on the west coast from Northern Damara Land to the Congo. Holub records this Starling

from the Central Transvaal and Bechuanaland, Ayres from the Transvaal and Mashonaland. Whyte met with it at Zomba and Mount Chiradzulu in Nyasaland, and Anchieta at Humbe, Huilla and Gambos in Benguela.

Habits.—In its general habits this species resembles *L. phanicopterus*, but its note is different, according to Ayres. It feeds on insects, berries and fruit, and nests in the holes of trees; builds an untidy structure of dry grass, straws and green leaves, and lays from three to five elongated bluish-green eggs sparingly spotted with reddish-brown. They average 1.05×0.78 .

Uatopholia Corrusca
 18. **Lamprocolius melanogaster.** *Black-bellied Glossy Starling.*

Lamprotornis melanogaster, Swains. *Anim. in Menag.* p. 297 (1837).

Juida melanogaster, Gray, *Gen. B.* ii, p. 327 (1846); *Layard, B. S.*

Afr. p. 173 (1867).

Lamprocolius melanogaster, Sharpe, *ed. Layard's B. S. Afr.* p. 428

(1884); *id. Cat. B. M.* xiii, p. 182 (1890); *Shelley, B. Afr.* i, p. 43 (1896).

Description. Adult male.—Entire plumage dull black, glossed on the crown with deep steel-blue and green, on the nape and sides of neck with oil-green, on the back, rump, and upper tail-coverts with purple; the lesser wing-coverts with reflections of purple, the middle and greater coverts dark steel-green with a bluish lustre; the feathers of the bastard wing, the primary coverts and quills black glossed with violet on the outer webs, the secondaries with steel-green; lores and feathers round eyes black, unglossed; ear-coverts with violet reflections; throat and chest glossed with deep oil-green; rest of under surface dull black with purplish reflections on the breast, thighs and under tail-coverts; axillaries and under wing-coverts black glossed with purple; quills below black, tail-feathers black glossed with purple, chiefly on the outer web.

Iris golden yellow; bill and feet black.

Length 8.00; wing 4.30; tail 3.40; tarsus 1.00; culmen 0.65.

Adult female.—Considerably duller than the male, and without lustre on the lower breast and abdomen.

Young.—Duller than the female, a general sooty black with but little gloss on any of the feathers.

Distribution.—East and South Africa: from Mombasa and Zanzibar southward, through German East Africa and Mozam-

bique, into the Eastern Transvaal, Zululand, and Natal; extending into Eastern Cape Colony and ranging as far west as Knysna. This species is not very common in the Eastern Cape Colony, but is a resident, breeding both in the neighbourhood of Grahamstown and King William's Town. In Natal and Zululand it is fairly abundant and resident, as it is in the Eastern Transvaal.

Habits.—This Glossy Starling is much shyer and more retiring in its habits than its congeners, and confines itself very much to the thicker portions of the coast bush, rarely venturing into the more open country. Its peculiarly loud and harsh notes are frequently heard when the bird itself is invisible. When not breeding these Starlings are nearly always in small flocks that hunt through the bushes in search of berries and fruit, in addition to various seeds and insects. Like most birds they seem to be particularly fond of termites. In Spring they separate in pairs, and proceed to look for a convenient nest-hole in the trunk or limb of a tree, frequently taking possession of the old nesting-place of a Barbet. Into this they carry a few small sticks, pieces of straw, and dry grass, and a much larger quantity of hair, wool and feathers. About the end of September, in Natal, three or four eggs are laid, of a pale blue-green, spotted sparingly with pale reddish brown. They are somewhat elongated in shape, and measure about 1.05×0.75 .

Genus VI. PHOLIDAUGES.

Type.

Pholidauges, Cabanis, *Mus. Hein.* i, p. 198 (1850)....*P. leucogaster*.

Bill rather short, shorter than the tarsus, and slightly curved, the mandibles nearly equal; culmen rounded. Nostrils oval, open, in a groove. Wings rather long, the first quill rudimentary, the second, third and fourth nearly equal and longest. Tail short, much shorter than the wing, and nearly square. Tarsi short and strong, scutellated anteriorly. Feet moderately strong, the lateral toes equal. Claws short, curved and sharp.

Plumage of male and female markedly different, that of the male being highly glossy and metallic, that of the female dull and of obscure colours. Young males resemble the females. Occasionally a female (?) will produce one or two metallic plumes, but whether this indicates an accidental variation, or that old females ultimately assume a plumage like that of the males, is not known.

Four species and sub-species of this genus are known, their range being confined to Ethiopia and South Arabia. One sub-species occurs in South Africa.

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*Cinnerycinclus verreauxi*19. **Pholidauges leucogaster verreauxi.***Verreaux's Glossy Starling.*

Pholidauges leucogaster, Gurney, *Ibis*, 1862, p. 29; Bocage, *Jorn. Lisb.* 1868, p. 4.

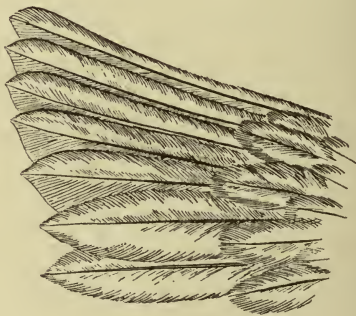
Juida leucogaster, Layard, *B. S. Afr.* p. 174 (1867).

Lamprotornis leucogaster, *Chapm. Trav. S. Afr.* ii, App. p. 404 (1868).

Pholidauges verreauxi, Bocage in Finsch and Hartl. *Vög. Ost.-Afr.* p. 867 (1870); *id.* *Orn. Angola*, p. 314, pl. 5 (1881); Sharpe, *ed.*

Layard's B. S. Afr. pp. 428, 846 (1884); *id.* *Cat. B. M.* xiii, p. 123 (1890); Shelley, *B. Afr.* i, p. 42 (1896).

Cinnerycinclus leucogaster, Gurney in Andersson's *B. Damara Land*, p. 156 (1872).

*Pholidauges verreauxi.**Pholidauges verreauxi* (tail).

Description. Adult male.—Above, crown and entire upper surface, including the wing-coverts and secondaries, as well as the sides of face and neck, below, the throat and upper chest, brilliant metallic copper colour with violet and purple reflections; rest of under surface pure white tinged with grey on the sides and flanks; lores, feathers below and behind eye and chin black; bastard wing and primaries, as well as the bases of some of the secondaries, black; under surface of quills black; axillaries and under wing-coverts blackish, with light edges and coppery reflections; edge of wing barred with white; tail, two centre feathers like the back, the

others blackish glossed with purple and violet, the outer feather with its outer web white for its basal three-fourths (this white on the outer tail-feather distinguishing *P. leucogaster verreauxi* from the more northern *P. leucogaster typicus*).

Iris bright yellow; bill and feet black.

Length 6·60; wing 4·25; tail 2·40; tarsus 0·80; culmen 0·60.

Adult female.—Above dark brown, the feathers of the crown and mantle with bright rufous edges, those of the back with paler edges, of the rump and upper tail-coverts still paler; wing-coverts and secondaries brown margined with rufous, some of the secondaries slightly glossed with green; primaries darker brown with narrow lighter edges (among the feathers of the mantle are three of a brilliant metallic copper-colour resembling those of the adult male); a spot of dusky in front of eye; over the eye some rufous feathers; ear-coverts reddish-grey; throat whitish with small streaks of dark brown; cheeks reddish, streaked with brown; an indistinct rufous collar across the chest; rest of under surface white streaked with dark brown, chiefly on the breast and flanks; under tail-coverts white; tail-feathers brown, the outer feathers edged with rufous on the outer webs; under wing-coverts and axillaries brown edged with rufous; under surface of quills rufous on the inner webs for their basal three-fourths. The female of *P. leucogaster verreauxi* only differs from the female of *P. leucogaster typicus* in being slightly more rufous on the crown.

Iris chrome-yellow; bill and feet black.

Length 6·60; wing 4·20; tail 2·40; tarsus 0·90; culmen 0·60.

The specimen described was shot on the Okavango River on the 10th of October, and although sexed as a female, may, I think, be really a young male beginning to assume the adult plumage; the presence of the three metallic feathers in the mantle possibly indicating the commencing change. With reference to this matter, Dr. Sharpe writes as follows regarding the northern *P. leucogaster typicus* in the Catalogue of the British Museum, vol. xiii, p. 122: "Some ornithologists have contended that in North-eastern Africa the adult female becomes metallic like the male. This experience has been controverted by other travellers. It seems to me most unlikely that the female should become metallic, as no tendency to go beyond the brown plumage exhibits itself in the South African *P. verreauxi* (but *vide supra*), and yet in three specimens from Abyssinia, two of which are sexed as females by Mr. Jesse, there are a few metallic purple feathers. It is at any rate a curious fact,

as is also the way in which the purple plumage is assumed, partly by a direct moult, and partly by a change of feather."

Young male.—Resembles the adult female, the change to the metallic plumage of the adult male being due, partly to a moult, but chiefly to an alteration in the structure of already existing feathers.

Distribution.—South, East and South-west Africa. This species has not been recorded from Cape Colony or Great Namaqua Land, but occurs not uncommonly in Damara Land, and ranges on the west coast as far north as the Congo, where it meets with the typical *P. leucogaster*. Towards the east it is found not uncommonly in Natal, Zululand, and the Transvaal, being partly resident, but chiefly migratory in these localities. It also occurs in the Orange Free State. It ranges throughout Matabili Land, Mashonaland, and the Portuguese Territory, and extends across the Zambesi into Nyasaland and German East Africa as far north as Zanzibar; the typical *P. leucogaster* being again found in North-east Africa and Abyssinia.

Habits.—These beautiful Starlings, although not so common as some of the other Glossy Starlings in Natal, are by no means rare in Autumn and Winter. At this season they are almost invariably in flocks, consisting entirely of either male or female birds. Towards Spring they appear to migrate northwards, sometimes after they have paired.

During their stay in Natal they feed chiefly on berries and small fruit, but also on insects, and particularly upon the flying termites which they take on the wing, darting upon them from the top of some convenient bush or other advantageous station. In the Transvaal many of these birds are resident, particularly in the Rustenburg district, where they breed; at the same time the majority appear to migrate towards Spring. When migrating or moving for any distance, they fly in flocks and usually at a considerable height.

Andersson remarks that in Damara Land this species is migratory "arriving at the approach of the rainy season, and gradually leaving as the country dries up, though I have observed a few individuals remaining long after the general emigration was over, and these may probably stay throughout the year. The exquisitely coloured males arrive first, and, as far as I have observed, associate but little with the sombre females, from which they differ so marvellously in appearance."

Like the other Glossy Starlings, this species builds its nest in the holes of trees, in the Transvaal in December, lining some natural hollow, or the old nest-hole of a Barbet, with wool and feathers, over which they place green leaves, which are renewed from time to time. The eggs, usually four in number, are pale blue, sparingly spotted with pale brown at the large end. They measure 0.90×0.70 .

Family III. ORIOLIDÆ.

The cutting edges of both mandibles smooth, the upper mandible with a distinct notch. Nostrils well in advance of the base of the bill, and nearer the commissure than the culmen, not concealed by plumes or bristles. Tongue not tubular. Rictal bristles present. Tarsi scutellated anteriorly, covered by two longitudinal laminae posteriorly. Tail-feathers twelve. Primaries ten. Sexes differ very slightly when fully adult; the plumage of the young streaked. One moult only, in autumn.

The Orioles are distributed over a large portion of Europe, Asia and Africa.

About forty species and sub-species are described; eight species are found in the Ethiopian Region, and three of these occur to the south of the Zambesi and Cunéné Rivers.

Genus I. ORIOLUS.

Type.

Oriolus, *Linn. Syst. Nat.* i, p. 160 (1766) *O. galbula*.

Bill moderate, about as long as the head, conical, decurved to the point, which is notched. Nostrils basal, lateral, bare and pierced horizontally in an extended membrane. Lores feathered. Rictal bristles fairly well developed. Wings long and sharp, the first quill much shorter than the second, the third the longest. Tail shorter than the wing, the end slightly rounded, Tarsi short, scutellated anteriorly, covered by two entire plates posteriorly. Toes scutellated. Claws curved, sharp, and grooved laterally. Plumage yellow and black.

The Orioles are essentially tree-birds, seldom descending to the ground, but obtaining their food, consisting of insects, fruit, and

berries, from the leaves and branches of trees. All the species have peculiarly loud and mellow call-notes, and many of them a song of a few rich and liquid notes. The Orioles build shallow, saucer-shaped nests, which they suspend by the rims from the forked branches of trees, often at a considerable height. They lay four or five eggs of a creamy white, spotted sparingly with dark brown or black.

Key to the Species.

- a.* Entire head golden-yellow.
*a*¹. Outer tail-feather black at the base *O. galbula*, p. 48.
*b*¹. Outer tail-feather entirely yellow *O. notatus*, p. 50.
b. Head black *O. larvatus*, p. 51.



Oriolus larvatus.

Oriolus

20. **Oriolus galbula.** *Golden Oriole.*

Oriolus galbula, *Linn. Syst. Nat.* i, p. 160 (1766); *Layard, B. S. Afr.* p. 135 (1867); *Gurney in Andersson's B. Damara Land*, p. 124 (1872); *Dresser, B. Europe*, iii, p. 365, pl. 144 (1875); *Sharpe, Cat. B. M.* iii, p. 191 (1877); *id. ed. Layard's B. S. Afr.* p. 411 (1884); *Shelley, B. Afr.* i, p. 41 (1896).

Description. Adult male.—Entire head and body golden yellow, rather deeper on the breast; a black streak from the eye to the base of the bill; wing-coverts black, the cubital coverts narrowly tipped with yellow, the primary coverts broadly edged and tipped with yellow; quills black, the secondaries tipped with pale yellow; axillaries and under-wing-coverts golden yellow. Tail black, the two centre feathers slightly tipped with yellow, which increases on each succeeding feather until only the bases of the outer feathers are black.

Iris red ; bill dull red ; feet dark brown.

Length 10·00 ; wing 5·90 ; tail 3·10 ; tarsus 0·80 ; culmen 1·00.

Adult female.—Resembles the adult male in colour, but is somewhat duller. She appears to take considerably longer than the male in assuming her fully adult plumage—probably two years or more—and, as a result, has been frequently described and figured in a plumage resembling that of the young.

Young.—Above olive-yellow ; the wings dusky brown tinged with olive ; tail-feathers olive with black bases and tips ; throat and breast grey streaked with black ; flanks yellow with indistinct streaks ; lores dusky ; bill reddish-brown ; feet black. The change from the streaked immature to the adult plumage is due to a change in the colour of the feathers and not to a moult.

Nestling.—Above, dull yellow-olive, each feather edged with pale yellow ; wings slate-grey, the coverts and secondaries tinged with olive and tipped with yellow, the primaries edged and tipped with white ; tail olive, tipped with yellow with increases in amount towards the outer feathers ; under surface of body grey, the breast streaked with brown ; thighs, under tail and wing-coverts yellow ; bill brown.

Distribution.—During the northern summer the greater portion of Europe, ranging into South-western Asia and Persia, a few remaining to breed in Algeria and Tunis ; migrating to Africa in winter, and extending as far south as German East Africa, Natal and Knysna, in Cape Colony, some reaching Damaraland and Madagascar. A considerable number of individuals spend the winter months in North Africa, in Tunis, Algeria, Morocco and the oases of the Sahara, perhaps the same birds that breed there.

Habits.—The Golden Oriole is a common and well known summer migrant in Central and Southern Europe. It reaches Germany from the south about the end of April or beginning of May, rears its young, and leaves again in August. A few enterprising individuals annually reach England. It is a bird of somewhat shy and secluded habits, fond of hiding its brilliant plumage amidst the foliage of the densest thickets and most thickly foliated trees ; as a result, it is much oftener heard than seen, its peculiarly clear and flute-like notes being audible at a considerable distance. They have been compared to the words “ Who are you ” rapidly whistled. During the pairing season the male pours out a short but brilliant song, chiefly in the early morning and towards evening ; this is syllabled by the Dutch as “ Kiel-i-vee-vo.” The alarm-call Naumann

compares to a harsh "Khrr." The flight of the Golden Oriole is undulating, its gait on the ground—a hop and not a walk. It feeds largely upon insects and especially upon caterpillars, in autumn upon cherries and other fruit in addition. The nest, a saucer, or shallow cup-shaped structure, is always suspended from the forked horizontal smaller branch of a tree, usually an oak or pine, at a height of from twenty to forty feet. The framework of the nest is constructed of strips of inner tree-bark, leaves of sedge, and occasionally pieces of paper. These are wrapped round the supporting twigs and woven together. The cavity is lined with fine stalks of grass. About the end of May, in Germany, four or five eggs are laid. These are of a glossy, creamy-white ground colour, sparingly spotted with distinct markings of dark purplish-brown; usually they are elongated ovates, averaging about 1.25×0.87 . In South Africa this species, according to Andersson, "arrives in Damara Land with the return of the rainy season; but it is comparatively rare, and very few adult birds are seen; it is excessively shy and difficult to approach, both when perched on lofty trees and also when gliding rapidly through the underwood. Its food consists of insects and fruits."

Mr. Barratt, who met with this species in some numbers in the neighbourhood of Rustenburg in the Transvaal, also noticed their extreme shyness, and remarks that owing to this it was some time before he could obtain a specimen.

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Afr. Golden

21. **Oriolus notatus.** *Andersson's Oriole.*

Oriolus auratus (*nec Vieill.*), Gurney, *P. Z. S.* 1864, p. 2; Layard, *B. S. Afr.* p. 135 (1867).

Oriolus notatus, Peters, *Jour. f. Orn.* 1868, p. 132; Sharpe, *Ibis*, 1870, p. 218, pl. 7, fig. 2; *id.* *Cat. B. M.* p. 196 (1877); *id.* *ed.* Layard's *B. S. Afr.* pp. 412, 845 (1884); Gurney in Andersson's *B. Damara Land*, p. 124 (1872); Shelley, *B. Afr. i.* p. 41 (1896).

Description. *Adult male.*—Entire head and body golden yellow, deeper on the crown, back, rump, and breast; from the base of the bill a black streak extends through the eye to the ear-coverts; wing-coverts black, broadly edged and tipped with yellow; bastard wing black; quills black, broadly edged externally with pale yellow; under wing-coverts golden yellow; two centre tail-feathers black with yellow bases and tips, the next on each side yellow with a large black spot on each web, rest of tail-feathers entirely yellow.

Iris red; bill red; feet blackish-brown.

Length 8·00; wing 5·40; tail 3·00; tarsus 0·80; culmen 1·10.

Adult female.—Resembles the male, but is duller in colour.

Distribution.—On the East Coast, from Delagoa Bay to Mombasa, extending through the Northern Transvaal and Mashonaland, where it is “not uncommon,” according to Ayres, to East Bamangwato (Holub), the Okavango River, Ovampo Land, and Damara Land, from all of which localities it has been recorded by Andersson. Anchieta found this species at Humbe, to the north of the Cunéné River, and at other localities in Benguela.

Habits.—Andersson remarks in the “Birds of Damara Land” (page 125): “I have only obtained the adult of this splendid Oriole in Damara Land on a few occasions, and that always during the rainy season; the young, however, are frequently met with; and at the Okavango River the species is more common than in Damara Land proper. The young birds are easily obtained; but the old ones are excessively shy and difficult to procure, as they always perch on the most elevated and conspicuous trees, and retire into the densest parts of tangled brakes and thickets on the least approach of danger.”

“The food of this Oriole consists of seeds, berries, and insects. The irides are brown in the young birds and bright red in the adults; the bill is reddish-brown; the legs are lead-coloured.”

Larvatus

22. *Oriolus larvatus*. Black-headed Oriole.

Le Coudougnan, *Levaill. Ois. d'Afr.* vi, p. 52, pl. 261 (1808).

Oriolus larvatus, *Licht. Verz. Doubl.* p 20 (1823); *Holub and Von Pelz.*

Beitr. Orn. Südafr. p. 93 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 413, 845 (1884); *id. Cat. B. M.* iii, p. 217 (1877); *Shelley, B. Afr.* i, p. 41 (1896).

Oriolus capensis, *Swains. Class. B.* ii, p. 237 (1837); *Layard, B. S. Afr.* p. 134 (1867).

Oriolus arundinarius, *Burch. Trav. in S. Afr.* i, 464 (1824).

“Uhlaza” of the Zulus.

Description. Adult male.—Entire head, face, and throat, extending down the centre of the chest, black; rest of the body, above and below, golden yellow, tinged with olive on the back; wing-coverts black, broadly edged with yellow, the outermost with grey; primary coverts black tipped with white; quills black, the primaries

Shot. O. l. - collected by James B. B. Head

edged with grey, the secondaries with yellow; axillaries and under-wing-coverts golden yellow; the two centre tail feathers olive-green, the remainder black at the base, the terminal portion yellow, the amount of yellow increasing with each succeeding feather towards the outermost.

Iris red; bill dull red; feet black.

Length 9.25; wing 5.50; tail 3.25; tarsus 0.90; culmen 1.05.

Adult female.—Resembles the adult male in colour.

Young of the year.—Above olive-yellow indistinctly streaked with brown; head and face dusky-brown; wing-quills brown with paler brown margins; tail dark olive-green; below yellowish, the breast streaked with black.

Distribution.—South Africa: an abundant resident in all the forest and wooded districts in Cape Colony, Natal, Zululand, Portuguese East Africa and the Transvaal. It ranges northward into Nyasaland and German East Africa, thence into Central and North-east Africa and Angola, but has not been recorded from Damara or Great Namaqua Land. Examples from East and North-east Africa as well as Angola are considerably smaller than those from South Africa, and have been described as *O. rolleti*.

Habits.—This beautiful Oriole is found usually on the outskirts of forests, among detached groves of trees, and the large growth on the banks of streams and rivers. In such localities its rich flute-like notes may be generally heard. These Orioles are almost invariably in pairs. They pass most of their time among the upper branches of fairly lofty trees, preferring those of thick growth in which their brilliant plumage is concealed by a mass of foliage. They rarely settle on the ground. Their flight is undulating and seldom prolonged for any great distance. They feed on caterpillars, small beetles and other insects, also on berries and small forest fruits, occasionally on seeds. The young are fed exclusively on caterpillars. The nest is suspended from a fork near the end of a horizontal branch of a tree, at a height of from twenty to fifty feet. It is saucer-shaped, woven from a long grey lichen that grows on the higher forest trees, often where it is hidden by the natural growth. The eggs, three to five in number, resemble those of the Golden Oriole in size, shape, and colour.

*Green clutch
for growth
three*

Family IV. PLOCEIDÆ.

Bill very variable in size and shape, but more or less strong, cone-shaped, the edges of the mandibles smooth and unnotched; the culmen ending in a point among the frontal feathers; the nostrils within the line of the forehead or not far from it. Wings with ten primaries, the first or outer sometimes minute, sometimes fairly well developed. Tarsi strong, scaled anteriorly, the sides covered with longitudinal entire laminæ which meet in a ridge posteriorly. Toes usually strong, the claws curved and sharp.

The Weaver Birds, popularly known as "Finkes" in South Africa, are closely related to the true Finches or *Fringillidæ*, but may be usually distinguished by their having ten primaries, the Finches having but nine that are easily found. This distinction, however, does not invariably hold good, some of the *Fringillidæ* having as distinct a first primary as some of the *Ploceidæ*.

All the Weaver Birds build covered nests, usually suspended from trees or reeds, but sometimes placed on or near the ground, whereas the Finches (the Sparrows and a few South American species excepted) build open cup-shaped nests in trees or bushes.

About three hundred and fifty species of Weaver Birds are known, distributed over the Ethiopian, Oriental and Australasian Regions. Some two hundred and sixty species are found in Africa, including the sixty that occur to the south of the Zambesi River.

The family of the *Ploceidæ* is by Captain Shelley conveniently as well as very naturally divided into three sub-families:—

1. PLOCEINÆ, including the typical Weaver Birds, with the first primary fairly well developed, extending beyond the primary coverts and about as long as the tarsus. The sexes are nearly alike in winter but differ slightly in summer. They have a partial spring moult as well as an autumn one.

2. ESTRILDINÆ, the Waxbills or Rooibekies, finch-like birds of small size, with the first primary very small, attenuated towards the end, and sickle-shaped. The male and female nearly alike in plumage at all seasons. An autumn moult only.

3. VIDUINÆ, the Widow and Bishop Birds, with the first primary of minute size. The male and female nearly alike in winter, but differing markedly in summer, the males having a highly specialised breeding dress with frequently extremely brilliant colours or lengthened tail feathers.

Sub-family I. PLOCEINÆ.

The *Ploceinæ* are distributed over Africa and Southern Asia. They are usually of moderate size, and rather heavy and robust build; the sexes are much alike in winter, but the males in summer, after a partial spring moult, are brighter. The majority of the species are very social in their habits, breed in large colonies, and usually suspend their nests from trees or attach them to reeds. The nests are frequently retort-shaped with an entrance from below; they are invariably covered in above. The eggs vary greatly in colour even in the same nest, some being plain, others spotted. Twenty-two species and sub-species of *Ploceinæ* occur in South Africa.

Key to the Genera.

- a. Tail rounded, the outer feather shortest.
 - a¹. Prevailing colours yellow, or yellow and black.
 - a². With distinct hairs on the nape and back of neck.
 - a³. Bill higher than broad at nostrils *Hyphantornis*, p. 55.
 - b³. Bill nearly equal in height and depth at nostrils *Sitagra*, p. 66.
 - b². No hairs on nape or back of neck *Sycobrotus*, p. 71.
 - b¹. Prevailing colours not yellow or black and yellow.
 - c². With hairs on nape and back of neck.
 - c³. Head red, chocolate colour, or olive-yellow, breast white *Anaplectes*, p. 74.
 - d². No hairs on nape or neck.
 - d³. Entirely black, except outer edges of primaries, which are white; culmen flattened at base *Textor*, p. 78.
 - e². General colour chocolate brown.
 - Forehead and wing speculum white.
 - Bill very massive and deep, the culmen ridged and prolonged on forehead as far as middle of eye *Amblyospiza*, p. 80.
- b. Tail square.
 - c¹. Size larger; wing over 3·80; nostrils exposed; crown black *Ploceipasser*, p. 82.
 - d¹. Size smaller; wing under 2·40; nostrils entirely hidden by feathers; crown "scaled," the feathers black with light edges *Sporopipes*, p. 86.

Genus I. **HYPHANTORNIS.***Type.***Hyphantornis**, *Gray, Gen. B. ii, p. 351 (1849)*.....*H. cucullatus*.

Bill as long as, or longer, than the head, broad at the base, laterally compressed to the tip, higher than broad at the nostrils; the culmen broad, smooth and rounded, prolonged backwards to a point among the frontal feathers; the lateral margins angulated at the base, straight towards the tip. Nostrils oval, basal and exposed. Wings reaching a little beyond the base of the tail; the first quill short, the second equal to the sixth, the third, fourth and fifth nearly equal and longest. Tail short and rounded, the outer feather shortest. Tarsus as long as the middle toe. Toes strong, the outer and inner equal. Claws strong and curved. Plumage, prevailing colour yellow, or yellow and black. The males brighter in summer after a partial spring moult.

*Hyphantornis spilonotus.*

More than thirty species of African Weaver birds are included in this genus, seven occurring to the south of the Zambesi. They are of social habits, breed in large colonies and build more or less kidney- or retort-shaped nests which are either suspended from the twigs of trees or attached to the stems of reeds. The two or three eggs are spotted or plain, and vary greatly in colour even in the same nest. All the species feed on seeds and insects.

Key to the Species.

- a. With the throat black.
 - a¹. Entire head and face black *H. nigriceps*, p. 56.
 - b¹. Forehead only black, crown yellow.
 - a². A line of chestnut between the black forehead and yellow crown *H. cabanisi*, p. 57.

- b². No line separating the black forehead from
 the yellow crown *H. velatus*, p. 58.
 c¹. Forehead not black.
 c². Back black mottled with yellow *H. spilonotus*, p. 60.
 d². Back olive-yellow striped with black *H. shelleyi*, p. 62.
 b. Throat not black.
 d¹. Entire head yellow *H. subaureus*, p. 63.
 e¹. Forehead only yellow, rest of head and face
 greenish-yellow *H. jamesoni*, p. 65.

830 23. **Hyphantornis nigriceps.** *Black-headed Weaver Bird.*

Hyphantornis nigriceps, *Layard*, *B. S. Afr.* p. 180 (1867); *Sharpe*, *ed.*
Layard's B. S. Afr. p. 436 (1884); *id.* *Cat. B. M.* xiii, p. 456 (1890);
Shelley, *B. Afr.* i, p. 40 (1896).

Ploceus nigriceps, *Shelley*, *Ibis*, 1887, p. 35.



Hyphantornis velatus.

Description. Adult male in summer.—Above bright yellow
 mottled with black, each feather having a black centre; wings
 dark brown, the feathers margined externally with yellow; tail
 dark brown tinged with yellow; entire head, face, chin and throat
 black; a collar of pure yellow round the nape; under surface of
 body below the throat bright yellow.

Iris orange; bill black; legs and feet horn-brown.

Length 6·60; wing 3·40; tail 2·15; tarsus 0·85; culmen 0·80.

Adult female.—Above greyish-brown mottled with dusky; head
 greenish-yellow; throat and chest yellow; rest of under surface
 white, the sides grey.

Distribution. — From South Somaliland southward through

Zanzibar, Mosambique and Nyasaland to the Zambesi, and to the south of this river through Portuguese East Africa, Rhodesia and the Transvaal to Zululand and Natal, ranging westward through Bechuanaland and the Lake N'Gami district into Mossamedes and Angola.

Habits.—This species was described by Layard from examples obtained at Kuruman by Dr. Moffat. It does not differ from *H. velatus* in its general habits, but Ayres, who met with it breeding on the Umvuli and Quaequae rivers in Mashonaland, states that the nests are usually hung from the ends of the reeds, instead of being placed between the upright stems, as is generally the case with those of the Masked Weaver Bird. The nests of both species are kidney-shaped, with an opening on the under side, and are strongly and compactly woven with long pieces of green grass, and lined with grass leaves and the flowering tops. The eggs of this species also are much like those of *H. velatus* and vary in colour to an equal degree. They are white, blue, green or cream-coloured, sometimes plain, but often spotted all over with red or brown, or more sparingly marked with large blotches of reddish-brown. They average 0.90×0.60 .

Oetapra
 24. **Hyphantornis cabanisi.** *Cabanis's Weaver Bird.*

Hyphantornis cabanisi, Peters, *Journ. f. Orn.* 1868, p. 133; Sharpe, ed. *Layard's B. S. Afr.* p. 442 (1884); *id. Cat. B. M.* xiii, p. 461 (1890); Shelley, *B. Afr.* i, p. 39 (1896).

Hyphantornis nigrifrons (nec. Cab), Buckley, *Ibis*, 1874, p. 380; Sharpe in Oates' *Matabele-Land*, p. 319 (1881); *id. ed. Layard's B. S. Afr.* p. 326 (1884); Holub and Pelzeln, *Orn. Südaf.* p. 116 (1882).

Description. Adult male.—Forehead, ear-coverts, cheeks and throat black; front crown chestnut-red; hind crown orange-yellow merging into olive-yellow on the nape and upper surface of body; scapulars olive-yellow mottled with black; lesser wing-coverts dull olive-yellow with black bases; remaining coverts and quills dusky edged with yellowish; central tail-feathers olive-brown edged with olive-yellow, and tipped with blackish, other tail-feathers brown edged with olive-yellow; sides of neck yellow; under surface of body bright yellow tinged with orange on the lower throat and breast; the flanks, thighs and under tail-coverts whitish; under wing-coverts yellow.

Buch. S-C-lubberti

Iris yellowish-white; bill black; tarsi and feet brown.

Length 5·90; wing 2·80; tail 1·90; tarsus 0·85; culmen 0·65.

Adult female.—Above olive-yellow, the back streaked with dusky; tail-feathers olive-brown margined all round with olive-yellow; sides of face and neck and under surface of body pale yellow; axillaries, under wing-coverts and inner margin of quills yellow.

Iris reddish-hazel; bill, tarsi and feet pinkish.

Length 4·75; wing 2·70; tail 1·75; tarsus 0·75; culmen 0·60.

Young male.—Resembles the adult female in plumage, but the crown and back are brighter yellow; the lower surface of body yellow, tinged with orange on the chest.

Distribution.—From Natal northward through Zululand, the Eastern Transvaal and Portuguese East Africa to Lamu on the east coast; westward through Mashona and Matabili Land to the Lake N'Gami district and Damara Land. In the latter country Andersson found this species at Omaruru and on the Swakop River.

Habits.—Like those of *H. velatus*. Oates found insects in the stomach of one he examined. Messrs. Woodward met with this species breeding in Zululand, and describe the eggs as being white.

velatus Namapa
8316
25. **Hyphantornis velatus.** *Masked Weaver Bird.*

Ploceus velatus, Vieill. *N. Dict. d'Hist. Nat.* xxxiv, p. 132 (1819).

Ploceus tahatali, Smith, *Rep. Exp. Cent. Afr.* p. 50 (1836).

Ploceus mariquensis, Smith, *Ill. Zool. S. Afr.* pl. 103 (1845).

Hyphantornis mariquensis, Gray, *Gen. B.* ii, p. 351 (1849); Gurney, *Ibis*, 1868, p. 466, pl. 10; Layard, *B. S. Afr.* p. 182 (1867); Ayres, *Ibis*, 1871, p. 254; 1873, p. 284; 1877, p. 345; 1880, p. 105; 1884, p. 229.

Hyphantornis capitalis, Layard, *B. S. Afr.* p. 180 (1867).

Hyphantornis auricapillus, Layard, *B. S. Afr.* p. 183 (1867).

Hyphantornis velatus, Gurney in Andersson's *B. Damara Land*, p. 169 (1872); Sharpe, ed. Layard's *B. S. Afr.* pp. 439, 847 (1884); *id.* *Cat. B. M.* xiii, p. 464 (1890); Shelley, *B. Afr.* i, p. 39 (1896).

Description. Adult male in breeding plumage.—Forehead, lores, eyebrow, ear-coverts, sides of face, cheeks and throat black; crown, nape, sides of neck and under surface of body bright yellow, with a shade of golden on the crown, neck and breast; back olive-yellow obscurely streaked with brown; scapulars olive-yellow streaked with black; rump and upper tail-coverts yellow; wings brown, the

8317 Id. *v. circummarino* fresh, Masked
8316 *tahatali* " " "

middle coverts tipped, the quills edged with yellow; tail-feathers olive-brown edged with yellow; edge of wing yellow; axillaries white tinged with yellow; under wing-coverts grey; inner margin of quills yellow,

Iris orange-red; bill black; tarsi and feet flesh-colour.

Length 5·80; wing 3·00; tail 2·10; tarsus 0·80; culmen 0·65.

Adult male in winter.—Above ash-brown streaked with darker brown, the crown and nape tinged with olive-yellow; rump and upper tail-coverts unstreaked olive-yellow; lesser wing-coverts olive-yellow with brown bases; rest of coverts and quills brown margined with yellow or olive, the middle coverts tipped with pale yellow; tail olive-brown tinged with yellow; lores dusky; a faint eyebrow yellowish; ear-coverts, sides of face and neck olive-brown tinged with yellow; cheeks and throat yellowish-white; breast, sides and flanks pale brown tinged with yellow; centre of abdomen white; under tail-coverts fawn-yellow; edge of wing bright yellow; axillaries and under-wing-coverts pale yellow.

Iris light brown; bill dark brown; legs and feet dark flesh-colour.

Adult female.—Resembles the male in winter, but the lower back, rump and upper tail-coverts are ash-brown instead of olive-yellow.

Specimens from northern localities are smaller and brighter than those from further south. They have been separated and called *H. mariquensis*; but there is a regular gradation in size and colour from south to north or *vice versa*.

Distribution.—From Central Cape Colony, where it is common in the neighbourhood of Nel's Poort and Colesberg, through Bechuanaland to Damara Land and Benguela; eastward into the Orange Free State and Natal; northward throughout the Transvaal into Matabililand, but becoming less numerous to the north of the Limpopo River.

Habits.—These Weaver Birds are gregarious at all seasons of the year, and in summer frequently form very large breeding colonies, often consisting of several hundred pairs of birds. Frequently they commence building their kidney-shaped nests very early in the spring, towards the end of July or beginning of August, when many of the males still retain their immature or winter dress; but the nests are not completed, or the eggs laid, as a rule, until the beginning of November.

As a breeding place these birds prefer reed-beds, if any are

available, but should there be none, they suspend their nests from trees and bushes overhanging water, or occasionally over dry ground. When built among reeds, the nests are usually attached to two stems by the sides; but when in trees they are suspended from the drooping twigs. Like most of the Weaver Birds this species becomes very tame during the breeding-season, and it is a pleasing sight to watch the busy birds as they are engaged in constructing their ingeniously formed nests. They work with the greatest energy, the male fetching the long green grass-stems out of which the nests are woven, and usually assisting from the outside by passing one end through to the female inside the nest, she passing it back again, and so on. Whilst engaged in this work the birds frequently hang back downwards with extended wings, swaying gently to and fro, and all the time keeping up a ceaseless chattering.

In districts where the *Sansevieria* grows the nests of the Masked Weaver Birds are often constructed entirely of the marginal fibres of this plant.

The entrance to the nest is from below, the nest itself being shaped like a retort without a neck, or the shell of a garden snail. Although this species subsist largely on grain and grass-seed during winter, it feeds freely on insects during summer. The young are fed on soft larvæ, caterpillars and small grasshoppers. They remain in the nest for about thirty days.

The eggs of this Weaver, usually three in number, vary remarkably in colour, even in the same nest. They are of some shade of white, cream-colour, pink, green, or blue; often unspotted, but more frequently marked, more or less thickly, with small spots and dots of various shades of red and brown; less often they are blotched and clouded heavily with large masses of the same colours. They are somewhat elongated in shape, and average 0.93×0.58 .

26. *Hyphantornis spilonotus*. *Spotted-backed Weaver Bird*.

Ploceus spilonotus, *Vigors, P. Z. S.* 1831, p. 92; *Smith, Ill. Zool. S. Afr. Birds*, pl. 66, fig. 1, (1841); *Shelley, Ibis*, 1887, p. 29.

Hyphantornis spilonotus, *Gray, Gen. B.* p. 351 (1849); *Layard, B. S. Afr.* p. 181 (1867); *Gurney in Andersson's B. Damara Land*, p. 169 (1872); *Sharpe, ed. Layard's B. S. Afr.* pp. 437, 847 (1884); *id. Cat. B. M.* xiii, p. 468 (1890); *Shelley, B. Afr.* i, p. 39 (1896).

Description. *Adult male in breeding plumage.*—Crown and nape golden-yellow; back and wing-coverts black, each feather tipped with yellow; quills blackish edged with yellow or white; rump uniform ash-brown; upper tail-coverts olive tipped with yellow; tail feathers olive-brown tinged and edged with yellow; lores, eyebrow, sides of face, ear-coverts, cheeks and throat black; sides of neck and under surface of body yellow, tinged with golden on the sides of neck and breast; edge of wing yellow; under wing-coverts and under surface of quills dusky, edged and tinged with yellow.

Iris deep red; bill black; tarsi and feet flesh-colour.

Length 7·00; wing 3·60; tail 2·60; tarsus 0·90; culmen 0·80.

Adult female.—Above ash-brown, the back and scapulars streaked with dusky; upper tail-coverts and tail light brown tinged with olive-yellow; crown and neck olive-yellow streaked with dusky; eyebrow and sides of face pale yellow; ear-coverts olive; cheeks and under surface of body pale yellow, nearly white on the abdomen and under tail-coverts, the lower flanks and thighs light brown with a yellow tinge; wings as in the male.

Young.—Above like the female; below light ash-brown.

Distribution.—Eastern Cape Colony to the east of Port Elizabeth. It has been recorded from Grahamstown, King William's Town, East London and other localities. In Natal it is abundant in the neighbourhood of Durban, Pinetown and elsewhere near the coast, but becomes rarer further inland; it ranges into Zululand, Swaziland, the Transvaal and Portuguese East Africa, and extends to Lake N'Gami, but its presence in Damara or Great Namaqua Land is doubtful.

Habits.—This species is probably the commonest Weaver Bird in the lower districts of Natal and Zululand. Like *H. velatus* it is of a very social nature, remains in flocks all the year round and breeds in colonies, often covering several adjacent trees with its nests. These resemble those of *H. velatus* in being kidney-shaped with an opening below, but as far as I have observed they are never built among reeds, but invariably suspended from the outer twigs of a tree or bush, and preferably over water. The nests are roughly woven out of long green grass-stems, and, since the introduction of the Australian Blue Gum and Black Wattle into Natal, are invariably thickly lined with the long narrow leaves of these trees. Although the nests of this species are usually constructed without any projecting entrance neck, one is occasionally added, and in the Museum at Grahamstown is a nest ascribed to this bird with a

neck about twelve feet long. When engaged in building, these Weavers keep up an incessant chattering, and if undisturbed, become exceedingly tame and familiar, especially the males, who take an active part in the labour by fetching the grass and helping in the weaving from the outside of the nest, to which they cling with their sharp claws, generally back downwards with expanded wings. The female remains inside and assists by pulling one end of the grass through, then pushing it back again to the male. Many nests are abandoned before completion and others commenced, probably by young beginners; other nests fall down from the twig to which they are attached giving way; so that the ground below a tree in which these Weaver-birds are building is often covered with nests in all stages of construction.

The eggs of the Spotted Weaver Bird vary greatly in colour, almost as much so as those of *H. velatus*. They are white, blue, or green, frequently plain, but as often speckled and spotted with brown and reddish-brown. They measure about 0.75×0.56 and are usually three in number.

These Weaver-birds feed on grass-seeds and grain, as well as on insects, the nectar of aloes, the Australian "bottle-brush," and other flowering shrubs. The young are largely fed on soft insects, caterpillars, and various larvæ.

831 B² 27. **Hyphantornis shelleyi.** *Shelley's Weaver Bird.*

Hyphantornis vitellinus (*nec. Licht*), *Sharpe, ed. Layard's B. S. Afr.* pp. 439, 847 (1884).

Hyphantornis shelleyi, *Sharpe, Cat. B. M.* xiii, p. 464 (1890); *Shelley, B. Afr.* i, p. 39 (1896).

Description. Adult male.—Above olive-yellow, the back with black shaft-stripes; lower back, rump and upper tail-coverts bright golden-yellow; wing-coverts black, edged with yellowish; quills dusky, edged with yellow; tail-feathers olive, edged with yellow; forehead orange, crown and nape golden-yellow; lores, feathers round eyes, sides of face, front ear-coverts and cheeks, chin and upper throat black; rest of under surface golden-yellow, the chest more orange; axillaries, under wing-coverts and inner edges of quills yellow.

Iris pale brown; bill black; legs and feet flesh-colour.

Length 5.50; wing 3.00; tail 1.85; tarsus 0.85; culmen 0.65.

Adult female.—Above pale brownish-yellow, the back streaked

with dusky; lesser wing-coverts like the back; rest of wing-coverts and quills dusky edged with yellow; rump and upper tail-coverts olive; tail-feathers olive-brown, edged with yellow; crown pale brown, tinged with yellow; eyebrow and feathers below eye yellowish; ear-coverts yellow-brown; throat and breast buff-yellow; rest of under surface whitish.

Length 4·80; wing 2·60; tail 1·75; tarsus 0·85; culmen 0·60.

Distribution. — From Swaziland northward to the Zambesi, westward to Damara Land. Rustenburg, Transvaal (Ayres).

Habits. — Unrecorded.

833

28. *Hyphantornis subaureus*. Yellow Weaver Bird.

Ploceus subaureus, Smith, *Proc. S. Afr. Inst.* 1832; *id. Ill. Zool. S. Afr. Birds*, pl. 30, fig. 1 (1841); *Shelley, Ibis*, 1887, p. 25.

Hyphantornis subaureus, Gray, *Gen. B.* ii, p. 350 (1849); *Sharpe, ed. Layard's B. S. Afr.* p. 438 (1884); *id. Cat. B. M.* xiii, p. 445 (1890).

Xanthophilus subaureus, *Shelley, B. Afr.* i, p. 39 (1896).

Description. Adult male. — Above, crown golden-yellow fading into yellow tinged with olive on the back, wing-coverts and rump; some feathers of the back with brown centres; wing quills olive-brown, broadly margined with yellow and yellow-olive; tail-feathers yellow tinged with olive-brown; lores and eyelids dusky, sides of face, ear-coverts, cheeks, and entire under surface of body yellow, tinged with olive on the sides of the chest; edge of wing, axillaries, under wing-coverts, and under surface of quills bright yellow, the quills with dusky ends.

Iris reddish; bill brown; tarsi and feet flesh-colour.

Length 6·50; wing 3·35; tail 2·50; tarsus 0·85; culmen 0·70.

Adult female. — Resembles the male in plumage, but is less bright, as well as a trifle smaller in size.

Distribution. — From the Kowie River in Eastern Cape Colony through the Coast districts of Pondo Land, Natal, and Zululand, into Portuguese East Africa, Swaziland, and the Eastern Transvaal, Algoa Bay (Smith); Ladysmith, Natal (Reid); Transvaal (Ayres).

Habits. — These brilliantly-coloured Weaver Birds are very abundant among the thick reed-beds that fringe the estuaries of many rivers in Natal and Zululand, being in many localities by far the commonest species. Like the majority of the *Ploceinae*, they are sociable in their habits and breed in colonies among the reeds, many nests being often built within a comparatively small

833 *H. longirostris* - G.R.



Nest of *Hyphantornis subaureus*

area. To an ornithologist it is a charming sight to watch these delicately-coloured "canary-like" Weaver Birds during the breeding season in November hovering over the reed-tops or clinging to the stems while weaving their nests, all the time

keeping up a ceaseless chattering, which is changed to a harsher cry if they are alarmed. These Weavers feed indiscriminately on seeds, small berries, and insects. The nest, more or less beehive-shaped, is attached to the stem of one or two reeds, if to a single reed this passes through one side. The entrance is from below and at the side. It is woven from long strips of reed-leaves and is lined with finer pieces of leaf as well as the flowering tops. The eggs, three in number, are rather pyriform in shape, and white with a few black dots towards the larger end. They measure about 0.75×0.58 .

834 *Xanthops*
 29. **Hyphantornis jamesoni.** *Jameson's Weaver Bird.*

Hyphantornis xanthops (nec Hartl.), *Shelley, Ibis*, 1882, p. 352;

Sharpe, ed. Layard's B. S. Afr. p. 438 (partim) (1884).

Hyphantornis jamesoni, *Sharpe, Cat. B. M.* xiii, p. 447 (1890).

Xanthophilus jamesoni, *Shelley, B. Afr.* i, p. 39 (1896).

Description. Adult Male.—Similar to the male of *Hyphantornis subaureus*, but the yellow is tinged with green, only the forehead being pure yellow; the sides of neck and ear-coverts olive-green; wing-coverts and quills dark brown edged with olive; tail-feathers olive-brown margined with yellow.

Iris pale tawny yellow; bill black; feet pale brown.

Length 7.20; wing 3.75; tail 2.75; tarsus 1.05; culmen 0.80.

Adult Female.—A good deal greener than the male; the tail feathers without the yellow edgings on the inner web.

Iris light hazel; bill horn-brown.

Length 7.00; wing 3.35; tail 2.40; tarsus 1.00; culmen 0.75.

Distribution.—From Swaziland to Mashonaland and the Makalaka District. The type specimen was obtained by Mr. J. S. Jameson on the Umvuli River.

Habits.—Similar to those of *Hyphantornis subaureus*. Mr. Jameson, who met with this species on the Umvuli River in Mashonaland, on the 11th of September, states that it was not very common. Those seen were feeding on the blossoms of the "sausage tree."

Genus II. **SITAGRA.***Type.***Sitagra**, *Reichb. Syst. Nat.* pl. 79, fig. 15 (1850) *S. luteola*.

Like *Hyphantornis*, but the bill at the nostrils about equal in height and depth, instead of being higher than broad. The genus includes seven species of African Weavers, including four found in South Africa. They resemble species of the preceding genus in their general style of coloration and habits.

*Sitagra ocularia.**Key to the Species.*

- a.* Throat black; a black streak through the eye ... *S. ocularia*, ♂, p. 66.
- b.* Throat deep orange, like the face *S. ocularia*, ♀.
- c.* Throat chestnut, no black line through eye *S. xanthoptera*, p. 68.
- d.* Throat yellow or orange-yellow.
 - a*¹. Forehead orange-yellow.
 - a*². Without any trace of chestnut on the head, face or throat *S. capensis*, ♂, p. 69.
 - b*². The head, face and throat tinged with chestnut *S. capensis caffra*, ♂, p. 70.
 - b*¹. Forehead, crown and back olive-brown.
 - c*². Size larger. Wing over 3·60 *S. capensis*, ♀, p. 69.
 - d*². Size smaller. Wing under 3·50 *S. capensis caffra*, ♀, p. 70.

30. Sitagra ocularia. *Smith's Weaver Bird.*

Ploceus ocularius, *Smith, Proc. S. Afr. Inst.* 1828; *id. Ill. Zool. S. Afr.* pl. 30, fig. 2 (1839); *Shelley, Ibis*, 1887, p. 23.

Hyphantornis ocularius, *Layard, B. S. Afr.* p. 182 (1867); *Bocage Orn. Angola*, p. 328 (1881).

Hyphanturgus ocularius, *Sharpe, ed. Layard's B. S. Afr.* p. 435 (1884); *Shelley, B. Afr. i*, p. 38 (1896).

Sitagra ocularia, *Sharpe. Cat. B. M.* xiii, p. 427 (1890).

839^b. It - a - crocalus jamb spec? etc.

Description. Adult male in breeding plumage.—Crown, back and sides of neck and face, ear-coverts, cheeks and under surface of body yellow, with a golden tinge on the forehead, face, cheeks and breast; a streak through the eye and the throat black; upper surface of body, wing-coverts and outer web of quills olive-yellow; inner web of quills brown; tail-feathers olive-brown edged with yellowish; edge of wing, axillaries and under wing-coverts yellow, the coverts streaked with brown; quills below dusky.

Iris light brown; bill black; feet brown.

Length 6·50; wing 3·20; tail 2·65; tarsus 0·90; culmen 0·80.

Adult female.—Differs from the male in having the throat of a deep orange-colour.

Length 6·00; wing 3·00; tail 2·50.

Young male.—Resembles the female but is somewhat greener; the eye streak dusky; forehead, eyebrow, sides of face and lower surface of body bright yellow.

Distribution.—From the neighbourhood of Grahamstown in Eastern Cape Colony, eastward through Natal, Zululand, the Eastern Transvaal and Portuguese East Africa to the Zambesi. To the north of that river this species ranges through Nyasaland and German East Africa into the Upper Congo districts and Equatorial Africa.

Habits.—In the forest districts of the Eastern Colony this beautiful Weaver Bird is a not uncommon resident. In Natal and Zululand it is numerous but is almost invariably in single pairs, and is somewhat shy in its habits. Most frequently it is met with in the more open "Bush" or on the wooded banks of streams; occasionally it frequents shrubberies and gardens. It feeds to a limited extent on seeds and small berries, especially those of the wild date palm, but the bulk of its food consists of insects, particularly of wood-bugs and small beetles that frequent the bark and leaves of trees. Sometimes this bird may be seen scraping among the fallen leaves under a bush in its search for insects. The alarm note is harsh and several times repeated, the ordinary call a rather rapid chattering cry. Of all the South African Weaver Birds this species constructs the most beautiful and highly finished nest. Shaped like a retort, with the entrance from below through a long narrow neck, it is suspended from the extremity of a drooping branch, usually, but not invariably, over water. It is closely and strongly woven with fine pliable fibres, generally strips from leaves of the wild date, and although it resembles nests of *Sycobrotus bicolor* in

shape, it is readily distinguishable by its smaller size and much neater and more artistic finish. Occasionally a second and even a third entrance neck is added; this is usually about ten inches long, but a nest in the Albany Museum at Grahamstown has a neck upwards of eight feet long. Another nest of this species in the same collection is entirely woven from black horse-hair, and is a most finished specimen of bird architecture. These Weavers devote several months to the construction of their nests, and frequently abandon a partly constructed one to commence another close by. Sometimes a new nest will be suspended from the old one of the preceding year. As a rule Smith's Weaver Bird builds a solitary nest, occasionally two pairs will build on the same tree, and on one occasion I found a pair of these birds nesting in the midst of a colony of the Spotted Weaver Bird.

The eggs are two or three in number, white, rather closely spotted with pale red. They measure 0.72×0.54 .

Hyphantornis xanthopterus
 837^b 31. **Sitagra xanthoptera**.^{uo} Yellow-winged Weaver Bird.
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*Hyphantornis*, sp., *Kirk, Ibis*, 1864, p. 322.

*Hyphantornis xanthopterus*, *Finsch and Hartl. Vög. Ostaf.*, p. 399 (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 443 (1884); *id. Cat. B. M.* xiii, p. 444, pl. 13, fig. 2 (1890).

*Ploceus xanthopterus*, *Shelley, Ibis*, 1887, p. 25.

*Xanthophilus xanthopterus*, *Shelley, B. Afr. i*, p. 38 (1896).

*Description.* *Adult male*.—Above bright yellow, the feathers of back and scapulars slightly mottled with greenish; rump and upper tail-coverts bright yellow; wing-coverts yellow; bastard wing and primary coverts dusky edged with yellow; quills yellow, their outer margins and tips blackish; tail-feathers pale olive-brown edged with yellow; lores, feathers below eye, front of ear-coverts and cheeks as well as throat, chestnut-red; rest of head and neck, under surface of body, also under surface of quills and under wing-coverts, bright yellow.

Bill black; feet flesh-colour.

Length 6.00; wing 2.95; tail 2.00; tarsus 0.90; culmen 0.65.

*Distribution*.—Quilimane, the Zambesi Delta, and the valley of the Shiré River.

837<sup>c</sup> 14. (*Oriolus*) *Xanthopterus* *usarleyi*  
 837<sup>a</sup> 14 ( ) *sub aureus* *tongensis*

835

*Hyphantornis capensis*  
 32. **Sitagra capensis.** Cape Weaver Bird.

*Oriolus capensis*, Linn. *Syst. Nat.* i, p. 163 (1766).

*Ploceus capensis*, Smith, *Ill. Zool. S. Afr., Birds*, pl. 66, fig. 2 (1841).

*Hyphantornis aurifrons*, Layard, *B. S. Afr.* p. 179 (1867).

*Hyphantornis capensis*, Layard, *B. S. Afr.* p. 179 (1867).

*Hyphanturgus olivaceus*, Sharpe, ed. Layard's *B. S. Afr.* pp. 433, 846 (1884) *partim*.

*Sitagra capensis*, Sharpe, *Cat. B. M.* xiii, p. 430 (1890).

*Xanthophilus capensis*, Shelley, *B. Afr.* i, p. 38 (1896).

*Description.* Adult male in breeding plumage.—Entire head, face and under surface of body yellow, the forehead, sides of face and neck, cheeks and breast tinged with golden, the throat with olive; lores and feathers about eyes dusky; upper surface of body olive-yellow, the back slightly streaked with brown; wings brown, the feathers edged with olive-yellow; axillaries and under wing-coverts ash-brown; edge of wing yellow; tail-feathers olive-brown edged with olive-yellow.

Iris light red; bill black; tarsi and feet flesh-colour.

Length 7.25; wing 3.50; tail 2.30; tarsus 1.00; culmen 0.95.

*Adult female.*—Duller in colour; head and sides of face and neck like the back; cheeks and under surface of body olive-yellow tinged in places with brighter yellow.

Iris hazel brown; bill brown.

*Young.*—Above and below brownish-yellow obscurely streaked with brown.

*Distribution.*—Western Cape Colony, including the Cape Peninsula, extending as far north as the Orange River, eastward to Algoa Bay.

*Habits.*—This large and robustly built species is very generally distributed, in flocks of from ten to fifty or sixty individuals, over Western Cape Colony, and although it shows a certain preference for the neighbourhood of vleis and marshy ground, it is also found in very arid localities at a considerable distance from the nearest water. Its flight is rather heavy and undulating. The Cape Weaver feeds to a considerable extent upon seed and grain, but at times upon insects. It is also fond of sipping the saccharine juice of the Cape aloe and of various proteas, and individuals may be sometimes met with with their frontal feathers stained and matted together with the mingled nectar and pollen of these plants.

They build their large kidney-shaped nests in colonies, frequently suspending them from the boughs of a tree overhanging

8329. H. R. *Costaneigula*  
*Western Cape Weaver*



water, but just as often over dry ground. If unmolested they prefer a tree standing close to a house as a nesting site.

The nests are compactly woven with coarse grass or strips of reeds and sedge, the interior being warmly lined with fine grass-stems as well as the flowering tops. The entrance to the nest is from below, a narrow bar at the inner extremity dividing it from the interior and preventing the eggs or young from falling out in windy weather. The eggs, four or five in number, are of a uniform deep blue. They measure  $0.90 \times 0.66$ .

835 *Hyphantornis olivaceus*  
33. **Sitagra capensis caffra.** *Eastern Cape Weaver Bird.*

*Icterus caffer*, *Lichtenstein*, *Verz. Doubl.* p. 19 (1823).

*Icterus olivaceus*, *Hahn*, *Vög. aus Asien*, Lief. 6, pl. 4 (1822).

*Hyphantornis olivaceus*, *Holub and Pelzeln*, *Orn. Südaf.* p. 113 (1882).

*Hyphantornis aurifrons*, *Gurney and Ayres*, *Ibis*, 1878, p. 296; 1880, p. 105.

*Hyphanturgus olivaceus*, *Sharpe*, ed. *Layard's B. S. Afr.* pp. 433, 846 (1884) *partim*; *Ayres*, *Ibis*, 1885, p. 344, 1886, p. 290.

*Sitagra capensis*, subspecies *A. S. caffra*, *Sharpe*, *Cat. B. M.* xiii, p. 431 (1890).

*Xanthophilus caffer*, *Shelley*, *B. Afr.* i, p. 38 (1896).

*Description.* *Adult male*.—Resembles the male of *S. capensis*, but is smaller and brighter; the head, sides of face and throat are also tinged with chestnut-red.

Iris reddish-brown; bill black; feet pale yellowish.

Length 6.80; wing 3.60; tail 2.20; tarsus 1.05; culmen 0.95.

*Adult female*.—Resembles the female of *S. capensis* in colour, but is smaller.

Iris buff-yellow; upper mandible light brown; lower, straw-yellow; feet light brown.

Length in flesh 7.50; of skin 6.40; wing 3.45; tail 2.10; tarsus .95; culmen 0.90.

*Distribution*.—From the neighbourhood of Port Elizabeth throughout the greater part of Eastern Cape Colony, thence through Natal, Zululand, the Eastern Transvaal and Portuguese East Africa into Rhodesia, ranging as far north as the Zambesi River according to Dr. Holub.

*Habits*.—Very like those of the larger *S. capensis*; the eastern race, however, appears to feed to a much greater extent upon

836 *Melanopteryx trochæ oramobledon*  
weaver



insects and the saccharine juice of various flowers. It pays constant visits to the conspicuous scarlet flowers of the "Kaffir-boum," and feeds side by side with various Sunbirds on the nectar. I have noticed this Weaver also feeding with Sunbirds and Gurney's Long-tailed Sugar-bird on the honey of the Australian "Bottle-brush."

Mr. Ayres remarks that in the neighbourhood of Rustenburg several species of Sunbird and Weaver Finches, including the present, frequent a common parasitic plant for the sake of the nectar; he writes in the *Ibis*: "About Potchefstroom the birds of this species are much brighter in plumage this season (1886) than I have ever noticed them previously"—probably because the plumage of this Weaver is sometimes stained an intense orange colour by the mingled nectar and pollen of certain flowers. Occasionally this species feeds on figs and other fruit.

Its nest and eggs resemble those of the larger Cape Weaver Bird, the eggs being a trifle smaller; the nest is, however, frequently suspended between two reeds and is then built of strips of reed-leaves.

When alarmed this Weaver utters a loud "chur-r-r," at ordinary times a cheerful chattering note.

### Genus III. SYCOBROTUS.

*Type.*

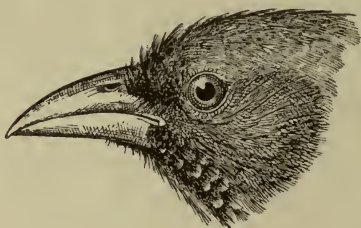
**Sycobrotus**, *Cabanis*, *Mus. Hein.* i, p. 182 (1850).....*S. bicolor*.

Bill as long as the head, the culmen curved to the tip, rounded at the base, the lateral margins curved and slightly sinuated. Nostrils basal, oval and exposed, shut in by a horny membrane, the base just reached by the nasal plumes. Wings moderate but somewhat rounded, the first quill short, the second equal to the eighth, the third longer than the seventh, the fourth and fifth equal. Tail of moderate length, slightly graduated. Tarsi robust and strongly scaled. Toes moderate, the inner shorter than the outer. Claws strong and curved.

This genus includes four species of African Weaver Birds. They differ considerably from the majority of the *Ploceinæ* in their habits and are usually met with in pairs, never in flocks, in the forest or thick bush. They feed very largely on insects, and build large and roughly constructed retort-shaped nests, suspended from the branches of trees. They lay two or three spotted eggs.

*Key to the Species.*

- a. Feathers of crown and throat uniform dull black *S. bicolor*, p. 72.  
 b. Feathers of crown and throat with grey tips..... *S. stictifrons*, p. 73.

*Sycobrotus bicolor.*

837

*Regulus* *Hoivest Weaver*  
**34. *Sycobrotus bicolor*. Black-backed Weaver Bird.**

*Ploceus bicolor*, Vieill. *N. Dict.* xxxiv, p. 127 (1819); Shelley, *Ibis*, 1887, p. 119.

*Sycobius bicolor*, Gray, *Gen. B.* ii, p. 352 (1849); Layard, *B. S. Afr.* p. 183 (1867).

*Sycobrotus bicolor*, Cab. *Mus. Hein.* i, p. 182 (1850); Sharpe, ed. *Layard's B. S. Afr.* p. 432 (1884); *id.* *Cat. B. M.* xiii, p. 422 (1890); Shelley, *B. Afr.* i, p. 37 (1896).

"Hinge Bird" of Natal Colonists.

*Description.* *Adult male*.—Head, face, cheeks, entire upper surface of body, tail-feathers, wing coverts and secondaries dull rusty-black, the rump and upper tail-coverts tinged with olive; primaries black edged with white; throat black, black mottled with yellow, or yellowish, depending on the season; rest of under surface golden-yellow, deeper on the breast; edge of wing mottled black and white; axillaries and under wing-coverts pure white.

Iris dark brown; bill brown, the edges whitish; tarsi and feet flesh-colour.

Length 6·30; wing 3·50; tail 2·30; tarsus 0·90; culmen 0·80.

*Adult female*.—Resembles the male in plumage.

*Distribution*.—South Africa: from Algoa Bay to Natal and Zululand.

*Habits*.—This species differs considerably in its habits from the majority of the *Ploceinæ*. It is never met with in flocks but almost invariably in single pairs, generally in thick forest or bush, where

*S. - b. Red-backed 837<sup>a</sup>*  
*S. - p. fulvus = S. bicolor*

the growth is both high and dense. These Weavers attract attention by their loud and frequently repeated harsh "creaking" notes, which have been not inaptly compared to the jarring of a rusty hinge. Mr. Ayres remarks: "Their notes are harsh and very unmusical, their ordinary song resembling the squeaking of a wheel wanting grease. They are fond of climbing and hanging about thick creepers and the foliage of trees in search of insects, much as some of the Barbets do, which birds they seem to me somewhat to resemble." In addition to insects, which constitute their ordinary food, these Weaver Birds occasionally feed on seeds, berries and small forest fruit. Their nests, shaped like long-necked retorts, are suspended from the extremities of branches, frequently at a considerable height and often overhanging a stream or open space in the bush. They are rather large and are coarsely woven from the tendrils of vines without any softer lining. A pair of birds will frequently work for three months on the construction of their nest. They invariably build alone, never in colonies. During the month of September or early in October they lay two, or occasionally three eggs, of a whitish ground colour rather thickly spotted with pale red. They measure about  $0.75 \times 0.60$ .

*Zambesi Forest Weaver*

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35. *Sycobrotus stictifrons*. *Spot-headed Weaver Bird*.

*Symplectes stictifrons*, Fischer and Reichen. Journ. f. Orn. 1885, p. 373; Reichen. Journ. f. Orn. 1889, p. 281.

*Sycobrotus bicolor*, Sharpe, ed. Layard's B. S. Afr. p. 432, pt.

*Sycobrotus stictifrons*, Sharpe, Cat. B. M. xiii, p. 424 (1890); Shelley, B. Afr. i, p. 37 (1896); Selater W. L., Ibis, 1899, p. 285.

*Description.* *Adult male*.—Like the male of *S. bicolor*, but the brown feathers of the crown and throat are tipped with grey.

Iris dull wine-colour (Francis); bill brown; tarsi and toes flesh-colour.

Length 6.30; wing 3.50; tail 2.20; tarsus 0.90; culmen 0.75.

*Adult female*.—Resembles the male in colour.

*Distribution*.—From Inhambane in Portuguese East Africa, where it "is found all over this district, wherever there is thick bush" according to Mr. H. F. Francis, northward to the Zambesi River, where Reichenow obtained specimens at Quilimane and Kirk on the Shiré River, thence through Mozambique and Nyasaland (Whyte), to the Rovuma River (Thomson).

*Habits*.—Similar to those of *S. bicolor*.



Genus IV. **ANAPLECTES.***Type.***Anaplectes**, *Reichenbach*, *Singvögel*, p. 86 (1863).....*A. melanotis*.

Bill moderately long, slender and pointed, the culmen rounded at its base, nearly straight for its basal two-thirds, descending towards the tip. Nostrils oval, exposed, and not reached by the nasal plumes. Wings pointed, the first primary short. Tail graduated, the outer feather shortest. Plumage with hair-like plumes on the nape; breast white.

Includes four species of African Weaver Birds.

*Key to the Species.*

- a. Bill orange-red. Quills edged with yellow. Head and neck red in adult males, yellowish in females.
  - a.<sup>1</sup> Without black on the ear-coverts..... *A. rubriceps*, p. 74.
  - b.<sup>1</sup> Ear-coverts black tinged with red..... *A. gurneyi*, p. 76.
- b. Bill dusky brown. Quills not edged with yellow. Head blackish; back mottled with white; throat white like the breast..... *A. angolensis*, p. 77.

*Anaplectes rubriceps.*

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**36. Anaplectes rubriceps.** *Red-headed Weaver Bird.*

*Hyphantornis rubriceps*, *Sundevall*, *Æfvers*, *Stockholm*, 1850, p. 97.  
*Malimbus rubriceps*, *Elliot*, *Ibis*, 1876, p. 466, pl. 13, fig. 2; *Sharpe*,  
*ed. Layard's B. S. Afr.* pp. 444, 847 (1884).  
*Sharpia ayresi*, *Shelley*, *Ibis*, 1882, p. 353, pl. 7, fig. 2.  
*Ploceus rubriceps*, *Shelley*, *Ibis*, 1887, p. 17.  
*Anaplectes rubriceps*, *Sharpe*, *Cat. B. M.* xiii, p. 411 (1890); *Shelley*,  
*B. Afr.* i, p. 35.

*Description. Adult male.*—Entire head, face, throat, breast, sides of neck and upper back, coming to a point in the centre of



lower back, scarlet vermilion, tinged with orange on the back and breast in some; scapulars black streaked with vermilion; sides of lower back, rump, and upper tail-coverts grey, the coverts often streaked with vermilion; lesser wing-coverts olive-yellow; rest of wing dusky brown, most of the feathers edged externally with yellow; tail-feathers dark grey edged externally with yellow; lower breast, abdomen, under tail and wing-coverts white, the sides and flanks grey, the axillaries and under wing-coverts tinged with yellow.

Iris red-brown; bill pale yellow; tarsi and feet brown.

Length 5·75; wing 3·25; tail 2·40; tarsus 0·75; culmen 0·65.

*Adult female*.—Above grey; below white; the head, face, neck, throat and upper chest tinged with orange-yellow; forehead and lores dusky; wings and tail as in the male.

Length 5·50; wing 3·10; tail 2·00; tarsus 0·70; culmen 0·60.

*Young male*.—Resembles the female. Described and figured by Captain Shelley as *Sharpia ayresi* in the *Ibis* for 1882.

*Distribution*.—Portuguese East Africa, Swaziland, and the Eastern and Northern Transvaal, ranging into Matabili, Mashona and Nyasa Lands. Is a resident and breeds near Komati Poort (Francis), and on the Limpopo River in the Transvaal, as well as on the Tatin and Umvuli Rivers in Matabililand (Ayres). Mr. Whyte obtained examples at Zomba and Mpimbi in Nyasaland.

*Habits*.—During the course of Mr. J. S. Jameson's expedition to Matabililand in 1881 this species was found breeding, but as the specimens collected were in immature plumage Captain Shelley was led to describe them as belonging to a new species (*Sharpia ayresi*). Individuals of the Red-headed Weaver Bird, like those of several species of *Sitagra* and *Hyphantornis*, occasionally breed while still retaining their young plumage; Mr. Ayres adds the following notes to Captain Shelley's description in the *Ibis*.

"This is by no means a common bird. We found it breeding at the Tatin; it makes a rough retort-shaped nest, which it hangs, mouth downwards, from the outer twigs of rather tall trees. Sometimes a new nest is hung on the tube of the last year's structure. Mr. Jameson found a nest to the north of the Umvuli in October, with two blue eggs in it; and at the Tatin we pulled down one of the double nests, and Mr. Jameson, on trying to put his hand up the tube, very nearly got bitten by a snake, which was lying in the nest and had swallowed the old bird as well as her blue eggs."

The Red-headed Weaver is very like the common Spotted Weaver Bird in its habits, and has the same noisy chattering cry at

its breeding colonies. The two species indeed sometimes breed together and hang their nests from branches of the same tree; the nests of the present bird may be distinguished by their long hanging entrance-necks.

The accompanying illustration of the nests of three species of Weaver Birds in the same tree is from a photograph by Mr. Francis, taken near Komati Poort in the Transvaal. The larger stick-nests are those of *Textor niger*, the Buffalo Weaver Bird; the nests with necks those of *Anaplectes rubriceps*; the rounded ones those of *Hyphantornis spilonotus*, the Spotted Weaver Bird.



Nests of the Buffalo, the Spotted, and Red-headed Weaver Birds.

37. *Anaplectes gurneyi*. Gurney's Weaver Bird.

*Sycobius rubriceps* (nec. Sundev.), Bocage, Journ. Lisb. 1877, p. 275  
id. Orn. Angola, p. 334 (1881).

*Ploceus gurneyi*, Shelley, Ibis, 1887, p. 17, pl. 1, fig. 1.

*Anaplectes gurneyi*, Sharpe, Cat. B. M. xiii, p. 412 (1890); Shelley,  
B. Afr. i, p. 35 (1896).

*Description*.—Male, not quite adult (type). “Similar to *A. rubriceps*, but with yellow on the back, not red; the head deep scarlet, as also the throat; a spot on the chin black, as well as the base of the cheeks; the lores, the feathers round the eyes and the ear-coverts black;” bill orange-yellow; feet reddish; iris brownish-red (*Anchieta*).

Length 6·20; wing 3·35; tail 2·00; tarsus 0·75; culmen 0·70. (*Cat. Brit. Mus.*).

*Distribution*.—South-west Africa; Caconda, ranging into the Cunéné River valley and Ovampo Land.

Nyasaland; from the Tanganyika Plateau to the north-west of Lake Nyasa (*Shelley*).

38. *Anaplectes angolensis*. *Sharpe's Weaver Bird*.

*Sharpia angolensis*, *Bocage, J. Lisb.* 1878, p. 258; *id. Orn. Angola*, p. 558 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 443 (1884) *Shelley, B. Afr. i*, p. 34 (1896).

*Ploceus angolensis*, *Shelley, Ibis*, 1887, p. 18, pl. 1, fig. 2.

*Anaplectes angolensis*, *Sharpe, Cat. B. M.* xiii, p. 413 (1890).

*Description. Adult*.—Above chocolate-brown mottled with white; the feathers of the mantle and back white or yellowish-white on the inner webs, brown on the outer ones; scapulars uniform chocolate-brown; lower back chocolate-brown, the feathers sulphur-yellow at the tips; rump entirely sulphur-yellow; upper tail-coverts dusky-brown washed with sulphur-yellow; wing-coverts chocolate-brown, the median and greater coverts white at the ends, forming a double wing-bar of which the median one is the broader; bastard-wing, primary-coverts and quills chocolate-brown with whitey-brown edges to the latter; tail feathers ashy-brown fringed with whitey-brown, yellowish on the centre feathers; crown of head, sides of face, ear-coverts and sides of neck dark chocolate-brown; cheeks and under surface of body white with a wash of sulphur-yellow, a little more distinct on the sides of body; under wing-coverts white; quills below dusky, ashy along the inner edge.

Iris brick-red; bill blackish; feet brown (*Anchieta*).

Length 5·40; wing 3·25; tail 1·65; tarsus 0·70; culmen 0·70.

*Distribution*.—Benguela, extending into Ovampo Land.



Genus V. **TEXTOR.**

**Textor**, *Temminck, Pl. Col.* iii, pl. 446 (1828).....*T. albirostris*. *Type.*

Bill rather long, cone-shaped, broad at the base, compressed laterally, the culmen flattened towards the base and prolonged backwards to a point on the forehead, curved towards the tip; the lateral margins sinuated; the gonys long and ascending; nostrils basal, ovate, lateral, uncovered by plumes. Wings rounded, reaching a short distance beyond the base of the tail; the first primary about half the length of the second, which equals the fifth and is a little shorter than the third and fourth. Tail of moderate length and rounded. Tarsi as long as the middle toe, robust and coarsely scaled anteriorly; the lateral toes equal, as long as the hind toe. Claws moderately strong and curved. Sexes differ slightly in plumage.

This genus includes three species of African Weaver Birds, one only inhabiting South Africa.

*Bubalornis*

877      **39. Textor niger.** *Buffalo Weaver Bird.*

*Bubalornis niger*, *Smith, Rep. Exp. Centr. Afr. App.* p. 52 (1836).

*Textor erythrorhynchus*, *Smith, Ill. Zool. S. Afr.* pl. 64 (1841);  
*Layard, B. S. Afr.* p. 178 (1867); *Holub and Pelzeln, Ornith. Südaf.*  
p. 113 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 445 (1884).

*Bubalornis erythrorhynchus*, *Gurney in Andersson's B. Damara Land*  
p. 165 (1872).

*Textor niger*, *Strickland & Slater, B. Damara Land, in Contr. Orn.*  
1852, p. 150; *Sharpe, Cat. B. M.* xiii, p. 509 (1890); *Shelley, B. Afr.*  
i, p. 34 (1896).

*Description. Adult male.*—Entirely black, the bases of the feathers white; most of the feathers of the sides and flanks, under the wings, parti-coloured, black and white; primaries (excepting the outer two) edged externally with white, their inner webs below for their basal three-fourths, silvery white.

Iris hazel; bill red; tarsi and toes salmon colour.

Length 9.60; wing 4.75; tail 4.50; tarsus 1.25; culmen 0.90.

*Adult female.*—Browner than the male and duller in colour; the face tinged with grey; chin and throat whitish; some of the breast feathers margined with white.

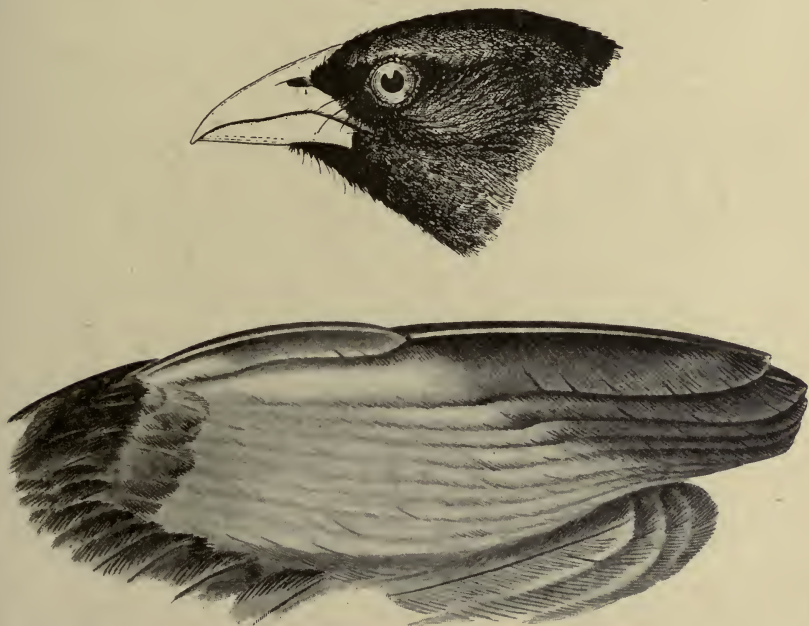
*Young.*—Resemble the female, but the feathers of the under surface are edged with white.



*Distribution.*—From Portuguese East Africa through the Transvaal and Mashona and Matabili Lands to Lake N'gami, Damara Land and Benguela.

It is not recorded from the district lying south of the Orange River or from Great Namaqua Land.

*Habits.*—Both Sir Andrew Smith, the discoverer of this large Weaver Bird, and Dr. Livingstone, found it following the buffalo for the sake of the numerous parasites that infest the hide of this animal.



*Textor niger* (head and wing).

More often these birds search for their food on the ground not far from trees or bushes, in which they seek refuge if disturbed. They feed upon the larger insects, locusts, termites, beetles and various larvæ, occasionally upon seeds and berries. These are alert, vivacious and noisy birds, fond of the society of their own species and that of other birds. They feed in flocks and build in colonies, their large collective nests being frequently surrounded by those of Sparrows and other Weaver Birds. On the Limpopo River they

frequently build in a tree that is already occupied by the nest of an eagle or vulture, possibly because the proximity of their powerful neighbours affords them protection against the attacks of monkeys and snakes. Generally from four to seven pairs of the Buffalo Weaver Bird unite to build a common nest of closely interwoven sticks and thorny twigs, oval openings being left here and there which are afterwards lined with dry grass and used both as nesting and roosting places. The collective nest, which measures three or four feet across, is repaired and added to from time to time and often lasts for many years. As many as six of the larger nests may be sometimes seen in a single tree, each inhabited by as many pairs of birds. The eggs, laid on the Limpopo in December, are three or four in number, greyish-white streaked and marbled with several shades of grey and brown. They measure about  $1.12 \times 0.90$ .

#### Genus VI. **AMBLYOSPIZA.**

*Type.*

**Amblyospiza**, *Sundev. Efvers*, 1850, p. 98 ..... *A. albifrons*.

Bill very massive and deep, cone-shaped; the culmen flattened at the base, arched, ridged, with a narrow but deep groove on each side near the base, extending backwards on the forehead beyond the middle of the eye; nostrils basal, lateral and rounded, partly concealed by frontal plumes. Wings moderate, rounded, the first quill small, the fourth and fifth longest. Tail graduated. Tarsi robust, strongly scutellated anteriorly; toes long and strong, the outer two about equal, the hinder longer; claws long and curved.

This genus contains five species of African Weaver Birds; one only occurs in Eastern South Africa and ranges into Nyasaland.

#### 40. **Amblyospiza albifrons.** *Thick-billed Weaver Bird.*

*Pyrrhula albifrons*, *Vigors*, *P. Z. S.*, 1831, p. 92.

*Pyrenestes frontalis*, *Smith*, *Ill. Zool. S. Afr.* 1840, pls. 61, 62; *Layard*, *B. S. Afr.* p. 191 (1867).

*Amblyospiza albifrons*, *Sundev. Efvs. K. Vet.-Ak Förh. Stockholm*, 1850, p. 98; *Sharpe*, ed. *Layard's B. S. Afr.* pp. 449, 848 (1884); *id. Cat. B. M.* xiii, p. 501 (1890); *Shelley B. Afr.* i, p. 33 (1896).

*Description.* *Adult male in summer.*—Above, crown and back chocolate-brown, the rump and upper tail-coverts blacker, most

of the feathers edged with buff, wing-coverts and quills black, the primaries with white bases; tail black; forehead white; lores and spot below eye black; sides of face, ear-coverts, cheeks, neck, throat and upper breast chocolate-brown; lower breast, abdomen and under tail-coverts dark grey, the feathers with dark shafts and buff margins; under surface of wing black with a patch of white on the base of the primaries.

Iris brown; bill grey, the base of upper mandible black; tarsi and feet reddish-brown.

Length 7·40; wing 4·00; tail 2·90; tarsus 0·95; culmen 0·90.



*Amblyospiza albifrons* ♀.

*Adult female.*—Above reddish-brown mottled with dark brown; lesser wing-coverts like the back; remaining coverts and quills brown-black edged with brown and rufous; upper tail-coverts dark brown edged with buff; tail-feathers brown-black edged with rufous, the outer tipped with white; lores and spot below eye black; ear-coverts rufous; cheeks and sides of neck dark brown streaked with white; under surface of body white streaked with dark brown, the sides and flanks tinged with reddish, the thighs brown edged with white; axillaries and under wing-coverts pale buff-red.

Iris dusky; bill greenish with dusky tip; tarsi and feet dusky.

Length 7·00; wing 3·40; tail 2·40; tarsus 0·90; culmen 0·60.

*Distribution.*—From the Kei River in Eastern Cape Colony through the coast districts of Kaffraria and Natal into Zululand, the Eastern Transvaal and Portuguese East Africa as far as the Zambesi, and extending to the north of that river into Mosambique and Nyasaland.

*Habits.*—This curious species is easily recognised from every other South African Weaver Bird by its sombre colour, its robust body, as well as by its thick and massive bill which gives it a some-



what ungainly look. Sir Andrew Smith remarks that it "inhabits exclusively the forests, and never condescends to visit but the largest trees, hence it is only very partially scattered over the country. The only specimens which have been obtained within the limits of the Cape Colony were discovered in the forests upon the eastern frontier. About Port Natal, however, the bird is not so rare, and specimens are readily to be obtained there at all seasons of the year. It feeds principally upon berries and small fruits."

I have myself only met with this Weaver Bird on the coast of Natal and Zululand, among the tall reeds that border many of the rivers and lagoons. In many such localities it is quite abundant, outnumbering any other species of the family. This species builds among the reeds, and, its thick and clumsy-looking bill notwithstanding, constructs a very neat and beautiful nest, shaped something like a flattened cone with the entrance at the lower edge. This is attached to the stems of two reeds over the water. It is woven with long pieces of coarse grass and strips of reed-leaf without any finer lining. Both birds labour at its construction, the male fetching the materials and working from the outside whilst hanging by his strong toes head downwards with extended wings, the female from the inside. Both male and female keep up an incessant chattering as they pass the end of the grass stem from one to the other through the walls of the nest. These Weavers nest in colonies, and like many other species of the family become very tame during the breeding season, so that one can easily watch them from a distance of a few yards only. Although these birds feed largely upon berries and large forest seeds they also take insects, especially beetles and termites, as well as locusts. The newly hatched young are fed on soft larvæ and the pulp of berries.

#### Genus VII. PLOCEIPASSER.

*Type.*

**Ploceipasser**, *Smith, Rep. Exp. Centr. Afr.* 1836, p. 51 ...P. mahali.

Bill large, conical, pointed, compressed laterally; the culmen slightly arched and prolonged to a point among the feathers of the forehead; nostrils open, not covered by nasal plumes. Wings moderately long and rounded, the first primary fairly large, extending nearly to the end of the primary coverts; the second and third equal and longest. Tail nearly square at the end.



Tarsi strongly scaled anteriorly, the sides laminated posteriorly. Toes moderately long, the outer and inner equal, the hinder shorter, the middle longest; claws curved and strong.

Six species of the genus are described. They are confined to the Ethiopian Region, the one best known, *P. mahali*, to the country between the Orange River and the Zambesi and Cunéné. Two other closely allied species, or races, inhabit the districts between lat. 10° S. and the Zambesi and Cunéné, and range a short distance south of those rivers into South Africa.

*Key to the Species.*

- a. Back, scapulars and lesser wing-coverts light brown ..... *P. mahali*, p. 83.
- b. Back, scapulars and lesser wing-coverts reddish-brown.
  - a<sup>1</sup>. Lower throat and breast unstreaked greyish-brown ..... *P. rufoscapulatus*, p. 85.
  - b<sup>1</sup>. Lower throat and breast whitish, streaked with brown ..... *P. pectoralis*, p. 85.



*Ploceipasser mahali.*

*White-browed Weaver Bird*

41. **Ploceipasser mahali.** *White-browed Weaver Bird.*

*Ploceipasser mahali*, *Smith, Rep. Exp. Centr. Afr.* App. p. 51 (1836); *id. Ill. Zool. S. Afr. Birds*, p. 65 (1841); *Layard, B. S. Afr.* p. 187 (1867); *Gurney in Andersson's B. Damara Land*, p. 166 (1872); *Holub and Pelzeln, Orn. Südafrik.* p. 120 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 447, 848 (1884).

*Ploceipasser pileatus*, *Layard, B. S. Afr.* p. 187 (1867).

*Ploceipasser mahali*, *Sharpe, Cat. B. M.* xiii, p. 245 (1890); *Shelley, B. Afr.* i, p. 34 (1896).

*Description. Adult male.*—Forehead and crown black; large eyebrow, extending to the nape, white; lores and cheeks black; ear-coverts, sides of face and neck, lesser wing-coverts, scapulars

and back light brown ; rump and upper tail-coverts white ; middle wing-coverts brown tipped with white ; greater coverts black tipped with pale rufous ; primary coverts and quills dark brown edged with pale brown ; tail-feathers dark brown edged and tipped with pale brown ; chin, upper throat, vent and under tail-coverts pure white ; rest of under surface dull white, the sides of chest tinged with brown ; edge of wing buff ; axillaries and under wing-coverts dull white.

Iris reddish-brown ; bill dusky ; tarsi and feet pale brown.

Length 6·80 ; wing 4·00 ; tail 2·50 ; tarsus 0·90 ; culmen 0·65.

*Adult female*.—Resembles the male in colour, but is slightly smaller.

*Distribution*.—From the Orange River valley northward to Damara Land on the west ; throughout the Transvaal into Matabili and Mashona Lands on the east ; abundant in Griqualand West and Bechuanaland.

*Habits*.—This large species is abundant to the north of the Orange River among bushes and mimosa trees, but is rarely met with in the open country. Of social habits, it remains in flock all the year round and breeds in company, several nests being generally built in a single tree. Rarely have I met with more pugnacious birds ; the males in spring are constantly fighting, and so desperate are their quarrels that the combatants frequently lie exhausted, side by side, on the ground, incapable of further movement. They are noisy birds, too, very “sparrow-like” in their manners and customs, and keep up a constant chattering while searching for food. This consists of locusts, termites, small beetles and a variety of small insects, grain and seeds. The young appear to be fed on larvæ and small caterpillars. If disturbed when feeding they seek shelter in the nearest bush or tree. In addition to their somewhat harsh call-notes of “chick-chick” the males in spring indulge in a song of some sweetness ; Andersson indeed remarks that, in Damara Land, “at the beginning of the rainy season this bird occasionally, though rarely, sings so melodiously that I have seldom heard anything more exquisite.” The nests are large, roughly built, kidney-shaped structures, usually placed near the ends of the branches of a mimosa or other thorny tree. They are constructed of long grass-stems, the blades and flowering tops being woven together the stiff stalks project in all directions. During the winter each nest has two entrances from below, separated in the interior by a narrow bridge of grass, on which the birds roost. At the beginning of the breed-

ing season one entrance is stopped up with leaves and grass, a shallow cavity being left in which the female deposits two or three eggs, about the first week in December on the Limpopo River. As soon as the young are on the wing the second entrance is unstopped, and the nest is again used, both by the old and young birds, as a roosting-place. These nests are annually repaired and last for many years. The eggs are white suffused with pink, thickly marked, especially at the broad end, with blotches and streaks of deep brown-pink. They average  $1.00 \times 0.72$ .

824 42. **Ploceipasser rufoscapulatus.** *Red-backed Weaver Bird.* *Bower Finch*

*Ploceipasser rufoscapulatus*, Büttik. *Notes Leyd. Mus.* x. p. 238, pl. 9, fig. 2 (1888); *Sharpe, Cat. B. M.* xiii, p. 248 (1890); *Shelley, B. Afr.* i, p. 34 (1896).

*Description.* *Adult male.*—Above, back, scapulars and lesser wing-coverts reddish-brown, fading into ash-brown on the lower back, rump and upper tail-coverts; middle and greater coverts black tipped with white; quills blackish edged with rufous and dull white; tail light brown; forehead and sides of crown black; centre of crown and nape ash-grey; eye-brow, ear-coverts and cheeks grey; lores, feathers round eye, upper ear-coverts and malar streak black; throat white; lower throat and breast greyish-brown; rest of under surface pale grey; under wing-coverts ash-colour mottled with brown.

Iris dark brown; bill, tarsi and feet horn-brown.

Length 6.20; wing 3.80; tail 2.30; tarsus 0.80; culmen 0.75.

*Distribution.*—Ovampo Land, the Cunéné River valley and Benguela.

826 43. **Ploceipasser pectoralis.**—*Stripe-chested Weaver Bird.* *Bower Finch*

*Ploceipasser pectoralis*, *Peters, Journ. f. Orn.* 1868, p. 133; *Sharpe, Cat. B. M.* xiii, p. 247 (1890); *Shelley, B. Afr.* i, p. 34 (1896).

*Description.* *Adult.*—Like *P. mahali*, but the mantle is more rufous; the feathers of the crop are streaked with large dark brown lanceolate centres, and the bill is black.

*Young.*—Back and edges of the secondaries more rufous than in the adult.

*Distribution.*—The Zambesi Delta and Nyasaland, ranging southward in Portuguese East Africa to Inhambane (Peters).

*Habits.*—Like those of *P. mahali*.



Genus VIII. **SPOROPIPES.***Type.***Sporopipes**, *Cabanis, Arch. f. Naturg.* viii, p. 332

(1847). ... .. S. squamifrons.

Bill short, conical and pointed, the culmen gently curved to the tip and prolonged posteriorly to a point among the frontal feathers; nostrils entirely concealed by plumes. Wings moderately long and rounded; the first primary short, the second slightly shorter than the third and fourth, which are equal and longest. Tail shorter than the wing and square at the end. Tarsi short and rather slender, scutellated anteriorly, the sides covered by longitudinal plates which meet in a ridge posteriorly. Toes rather short and weak, the hinder, outer and inner equal in length, the middle slightly longer; claws slender, curved and pointed. Plumage: the feathers of forehead and front crown "scale-like," with black centres and white margins.

Two small African Weaver Birds are included in this genus, one ranging over the district between the Orange River and the Zambesi and Cunéné Rivers, and extending into the south of Benguela, the other from West to North-east Africa.

*Sporopipes squamifrons.**Squamifrons*44. **Sporopipes squamifrons.** *Scaly-feathered Weaver Bird.*

*Estrela squamifrons, Smith, Rep. Exped. Cent. Afr.* p. 49 (1836);  
*Layard, B. S. Afr.* p. 199 (1867).

*Amadina squamifrons, Smith, Ill. Zool. S. Afr. Birds,* pl. 95 (1844).

*Sporopipes squamifrons, Sharpe, Cat. Afr. B.* p. 61 (1871); *Gurney in Andersson's B. Damara Land,* p. 177 (1872); *Bocage, Orn. Angola,* p. 321 (1877-81); *Sharpe, ed Layard's B. S. Afr.* pp. 451, 448 (1884); *id. Cat. B. M.* xiii, p. 407 (1890); *Shelley, B. Afr.* i, p. 33 (1896).

*Description. Adult male in breeding plumage.*—Above: forehead and crown black, each feather with a white margin and black centre, those of the occiput brown with pale brown margins; sides of head and face, entire upper surface of body, scapulars and lesser

*S - S - Damaraensis*



wing-coverts light brown; remaining wing-coverts and inner secondaries black margined with white; quills brown with paler edges; tail-feathers black edged all round with white; feathers in front of and below eye, chin and streak on each side of throat black; cheeks and centre of throat pure white; remaining under surface white, the sides of breast and flanks tinged with grey, the breast with fawn-colour; edge of wing mottled brown and white; axillaries and under wing-coverts white.

Iris light brown; bill pink; tarsi and feet flesh-colour.

Length 4·30; wing 2·25; tail 1·75; tarsus 0·55; culmen 0·40.

*Adult female*.—Similar to the male in colour, but smaller.

Length 4·00; wing 2·20; tail 1·50; tarsus 0·55; culmen 0·40.

*Young*.—Head light brown streaked with brown; wing and tail-feathers edged with dull white; otherwise like the adults.

*Distribution*.—South Africa: from Northern Cape Colony, Griqualand West and the Orange Free State northward throughout the Transvaal, ranging into Matabili, Mashona and Bechuana Lands, and extending to Lake Ngami, the Okavango River and the south of Benguela; on the west coast in Great Namaqua and Damara Lands.

*Habits*.—These pretty little Weaver Birds are very abundant on the banks of the Orange River in small flocks among the bushes and mimosa trees that fringe the banks of the river. Although they perch freely on bushes, they appear to obtain all their food, consisting of grass-seeds and small insects, from the ground. They are active and vivacious little birds, of quarrelsome dispositions and somewhat noisy when feeding, as they keep up a constant bickering with one another. They are very tame and fearless, frequenting the houses and kraals to feed among the poultry and sparrows. In winter they generally join the flocks of waxbills and finches. The nest is always built in a thorny bush at a height of from three to ten feet. It is an untidy-looking domed structure of irregular shape, artlessly woven out of grass with the stalks left projecting in all directions. The side entrance is concealed either by the bristling stalks of grass, or by a handful of grass placed in the bush in front of it. The interior of the nest is thickly lined, sometimes with feathers, at others with the down of various plants.

On the Orange River these Weavers build in March and April, on the Limpopo in June and July.

The eggs, four or five in number, vary in shape and colour; the ground colour is pale blue-green, this is thickly marked with

blotches and scrawls of brown and rufous. The eggs measure about  $0.65 \times 0.48$ .

### Subfamily II. ESTRILDINÆ.

In the *Estrildinæ* the first primary is minute, attenuated towards the end and falcate; the mantle is never striped at any stage; none of the inner wing-feathers are lanceolate; nor are the tail-feathers obtusely pointed; the hind claw is rather short and curved. The sexes do not differ much in plumage, nor do the males assume a breeding-plumage differing markedly from that of winter. They are mostly of small and many of minute size.

The sub-family *Estrildinæ* includes a number of small finch-like Weavers popularly known as Waxbills, Roodebecs, Ruddy Waxbills and Grassfinches. In winter they are usually found in flocks, feeding on the ground on grass and other small seeds. In summer they pair off and build small domed nests in grass or bushes. The remarkable Social Weaver Bird, which builds and inhabits a collective nest all the year round, is an exception. The common Waxbill also sometimes builds a nest which is inhabited during the breeding-season by several females or pairs of birds. At the same time none of the *Estrildinæ* appear to be polygamous in their habits, like many of the *Viduinæ*. With the exception of the Social Weaver, *Philetærus socius*, all the South African *Estrildinæ* lay pure white unspotted eggs. They subsist chiefly on small seeds, especially of grass, but feed their young on grubs and insects, and in summer add insects to their own diet. In confinement, in addition to small seeds, they are found to eat insects, spiders, small caterpillars and ant-cocoons. The *Estrildinæ* range over Africa, India and Australia. More than ninety species occur in Africa, and twenty of these range to the south of the Zambesi.

#### Key to the Genera.

- a. Bill rather variable; comparatively weak and slender; the culmen straight or not much curved.  
Colour of bill in adults more or less red.
- a<sup>1</sup>. Tail graduated; breast yellow, barred with black and white and spotted with white; wing-quills edged with olive-yellow ..... *Pytelia*, p. 89.
- b<sup>1</sup>. Tail rounded, the tail-feathers with broad ends and always tinged with red; breast and sides usually red, with small round white spots; wing-quills plain brown; bill not entirely red... *Lagonosticta*, p. 91.

- c*<sup>1</sup>. Tail graduated; the tail-feathers with narrower ends and not tinged with red; breast unspotted and not red ..... *Estrilda*, p. 97.
- d*<sup>1</sup>. Tail square and very short; breast and sides barred with black and white ..... *O. tygospiza*, p. 108.
- b*. Bill robust and finch-like and blue-black in colour; the culmen more arched.
- e*<sup>1</sup>. Tail short and rounded; breast white, the sides mottled dark ..... *Spermestes*, p. 110.
- f*<sup>1</sup>. Tail short and square, plumage almost entirely brown ..... *Philetærus*, p. 114.
- g*<sup>1</sup>. Tail rounded; all but the two centre feathers tipped with white; head and throat in male partly red ..... *Amadina*, p. 118.

Genus I. **PYTELIA.***Type.***Pytelia**, Swains. *Class. Birds.* ii, p. 280 (1837).....*P. phœnicoptera*.

Bill slender, cone-shaped and lengthened; the culmen swollen and slightly arched. Nostrils hidden by nasal plumes. Wings rounded, the distance between the tips of the primaries and the tips of the secondaries less than the length of the tarsus; the first quill very small. Tail short, graduated. Tarsi scutellated anteriorly. Feet very small.

The genus *Pytelia* includes twelve species of African Weaver-finches. Two species occur in South Africa. They frequent bushes and rarely perch much on the ground, have a somewhat monotonous song, and are gentle and confiding in their habits. Those species whose nesting habits have been observed build domed nests of dry grass in bushes, and lay three or four white eggs.

*Key to the Species.*

- a*. Forehead, face, and upper throat scarlet-vermilion ..... *P. melba* ♂, p. 90.
- b*. Forehead, face, and upper throat ash-grey ..... *P. melba* ♀, p. 90.
- c*. Feathers of breast and abdomen with dusky centres, each enclosing two round white spots ..... *P. nitidula*, p. 91.

*Zonogastur melba Finch*  
 45. **Pytelia melba.** Southern Red-faced Weaver Finch.

*Fringilla melba*, Linn. *Syst. Nat.* i, p. 319 (1766).

*Pytelia melba*, Strickland and Selater, *Contr. Orn.* 1852, p. 150;

Gurney in Andersson's *B. Damara Land*, p. 176 (1872); Sharpe, *ed.*

Layard's *B. S. Afr.* p. 468 (1884); Shelley, *B. Afr.* i, p. 32 (1896).

*Estrela melba*, Layard, *B. S. Afr.* p. 199 (1867).

*Zonogastis melba*, Sharpe, *Cat. B. M.* xiii, p. 296 (1890).



*Description. Adult male.*—Forehead scarlet; crown, nape, sides of face and neck grey; back, rump and wing-coverts olive-yellow; upper tail-coverts vermilion; tail-feathers black, the two central and the outer webs of the others tinged with scarlet; wing-quills dusky, the outer webs tinged with olive-yellow; cheeks and throat scarlet-vermilion; upper breast and sides golden-orange; remaining under surface thickly barred with brown and white, the tips of the feathers white; thighs brownish; under tail-coverts dull white; under wing-coverts mottled brown and white.

Iris red-brown; bill brick red, the culmen and tip dusky; feet light brown.



*Pytelia melba.*

Length 4·80; wing 2·20; tail 2·20; tarsus 0·45; culmen 0·70.

*Adult female.*—Duller in colour; forehead, cheeks and throat ash-grey; no orange on the breast; abdomen less distinctly barred.

Length 4·50; wing 2·20; tail 2·00.

*Young.*—Resemble the female, but the throat is nearly white and the bill is paler.

*Distribution.*—On the west from the Orange to the Congo River; on the east from Natal to the Equator. Ranges throughout the Transvaal and Matabililand and extends across the Zambesi into Nyasaland.

*Habits.*—Andersson writes: "This Finch is found sparingly in Damara and Great Namaqua Land, and usually occurs in pairs; its favourite resort is low bush and old abandoned village fences, whence the Damaras call it the 'Kraal bird.' Its food consists of seed and insects."

Mr. Ayres met with this species near Rustenburg and on the Limpopo River, in pairs among low mimosa bushes. He remarks: "These beautiful little birds affect the dense thorn-bush in preference to more open places; they are generally tame and easily got when found; one scarcely ever finds more than a pair together" (*Ibis*, 1886).



*Mandinka**Golden Green Waxbill.*46. **Pytelia nitidula.** *Hartlaub's Red-faced Weaver Finch.*

*Estrela nitidula*, *Hartlaub, Ibis*, 1865, p. 269; *Sharpe, ed. Layard's B. S. Afr.* p. 472 (1884).

*Pytelia hartlaubi (Bianconi)*, *Sharpe, ed. Layard's B. S. Afr.* p. 469 (1884).

*Pytelia nitidula*, *Sharpe, Cat. B. M.* xiii, p. 305 (1890).

*Hypargus nitidulus*, *Shelley, B. Afr.* i, p. 32 (1896).

*Description. Adult.*—Above olive-green; the rump and upper tail-coverts yellowish-green; an anteocular spot, extending round the base of the upper mandible, orange-buff; wings and tail olivaceous; under surface of body pale olive, many feathers of the breast and abdomen with dusky centres, each enclosing two white spots; under wing-coverts varied with olive and white.

Bill black; feet lead-coloured.

Length 3.20; wing 1.75; tail 1.20; tarsus 0.50; culmen 0.30.

*Distribution.*—From Natal to Mosambique; Durban, Natal (Ayres); Inhambane, Portuguese East Africa (Peters); Mozambique (Bianconi).

Genus II. **LAGONOSTICTA.***Type.*

**Lagonosticta**, *Cab. Mus. Hein. Th.* i, p. 171 (1850)...*L. rubricata*.

Bill as in *Estrilda*; the nasal orifice concealed by plumes. Wing longer than the tail. Tail short and much graduated, fan-shaped, the feathers very broad. Tarsi and feet as in *Estrilda*. Plumage vivid, generally varied with various shades of red; the lower surface dotted with round white spots. Size very small. The "Ruddy Waxbills," or "Fire Finches" as they are sometimes called from their vivid colouring, are confined to Africa. Twenty-one species are admitted by Dr. Sharpe in the Catalogue of the British Museum, and five occur in South Africa. Two of the South African species build domed nests of dried grass in thick grass-tufts, near the ground; but Heuglin states that the more northern *Lagonosticta minima* builds an artistic little nest under rafters in roofs, in holes in walls, and in crevices. All the Ruddy Waxbills, whose nesting habits are known, lay white eggs, from three to seven in number. Birds of this genus feed on grass and other small seeds, occasionally on spiders and small insects. Heuglin remarks of *Lagonosticta minima*: "The Blood-Finches are

lovable, bold little creatures, which confidently invade the interior of stable, cooking, or dwelling-house, in order to obtain a few crumbs. The call-note is a sharp chirp; the song is similar, though not unmelodious. I rarely noticed this little bird by day on trees or shrubs; they prefer the ground and resort to ditches, dung-heaps, or places where kitchen refuse lies, and sit on walls, roofs and windows, and they are very unwilling to abandon situations to which they have taken a fancy as long as men reside in the neighbourhood."

*Key to the Species.*

- a. Breast and sides of body crimson.
  - a<sup>1</sup>. Under tail-coverts black.
    - a<sup>2</sup>. Head slate-grey, back brown, not tinged with red or crimson ..... *L. rubricata*, p. 92.
    - b<sup>2</sup>. Head and back strongly tinged with crimson ..... *L. jamesoni*, p. 93.
  - b<sup>1</sup>. Under tail-coverts brown, head brown ... *L. brunniceps*, p. 94.
- b. Breast and sides of body black thickly spotted with white.
  - c<sup>1</sup>. Under tail-coverts black.
    - c<sup>2</sup>. Spots on breast and sides smaller and pure white ..... *L. niveoguttata*, p. 95.
    - d<sup>2</sup>. Spots on breast and sides larger, white tinged pink..... *L. margaritata*, p. 96.



*Lagonosticta rubricata.*

81 47. **Lagonosticta rubricata.** *South African Ruddy Waxbill.*

*Fringilla rubricata*, *Licht. Verz. Doubl.* p. 27 (1823).

*Estrela rubricata*, *Layard, B. S. Afr.* p. 197 (1867).

*Lagonosticta rubricata*, *Sharpe, ed. Layard's B. S. Afr.* p. 475 (1884);

*id. Cat. B. M.* xiii, p. 281 (1890); *Shelley, B. Afr.* i, p. 31 (1896).

*Description.* *Adult male.*—Crown and hind neck grey; mantle, back and wings brown; rump and upper tail-coverts crimson; tail-feathers black washed with crimson externally; forehead, eyebrow and feathers round eye crimson; ear-coverts and sides of neck grey

815 *L. rhodopareia haemidocephala*  
Melrose Ruddy Waxbill

tinged with crimson; cheeks, throat, breast, and sides of body crimson; some small white spots on the sides of body; centre of abdomen brownish-grey; vent, under tail-coverts and thighs black; axillaries and under wing-coverts yellowish.

Iris dusky; upper mandible blackish, lower ash-coloured, pink at the base; legs and feet dusky.

Length 4.75; wing 2.00; tail 1.90; tarsus 0.60; culmen 0.45.

*Adult female*.—Duller in colour; the abdomen brownish-yellow; the under tail-coverts edged with ash. The ear-coverts grey, untinged with crimson; a crimson spot in front of eye, but no eyebrow.

Length 4.40; wing 1.87; tail 1.75.

*Young*.—Resemble the female.

*Distribution*.—South-east Africa to the east of Grahamstown, ranging as far north as the Limpopo River. Natal and the Transvaal. Not found on the West Coast.

*Habits*.—These Ruddy Waxbills are not at all uncommon in many parts of the Eastern Colony and Natal, on rough pasture lands, grass veldts, and about the outskirts of the bush. They feed on the ground on grass seeds, and are generally in pairs, occasionally in small parties, but they never seem to form large flocks like the common "Rooibeekies." They have a gentle, twittering note, uttered both when they are feeding and when in flight. The nest is built in a tuft of long grass, and is well concealed, usually from six inches to a foot off the ground, surrounded on all sides, and covered in by the drooping blades. It is circular in shape, with a side entrance, and is constructed of fairly coarse grass stems loosely twined together. The interior is lined with feathers. The eggs, from four to six in number, are pure white, and average  $0.58 \times 0.45$ .

813 48. *Lagonosticta jamesoni*. *Jameson's Ruddy Waxbill*.

*Lagonosticta jamesoni*, Shelley, *Ibis*, 1882, p. 355; *id. Ibis*, 1886, p. 324; *id. B. Afr.* i, p. 31 (1896); *Sharpe, Cat. B. M.* xiii, p. 283, pl. 9, fig. 1 (1890); *id. ed. Layard's B. S. Afr.* p. 475 (1884).

*Description. Adult male*.—"Very closely allied to *L. rubricata*; the red portion of the plumage paler and of a pinker hue; the white spots on the sides of the chest scarcely visible; sides of the head rosy pink like the chest; upper parts tinted with that colour,

914 *L. rubicula* Hartlaub's Ruddy Waxbill



most strongly so on the sides of the crown and back of the neck" (Shelley).

"Iris dusky brown; bill bright bluish-ash, with the culmen and tip somewhat dusky; tarsi and feet pinkish-ash" (Ayres).

Length 4.00; wing 1.85; tail 1.30; tarsus 0.55; culmen 0.40.

*Adult female*.—Is duller in colour, especially below; under tail-coverts blackish, margined with pink.

Length 3.90; wing 1.80; tail 1.20; tarsus 0.55; culmen 0.40.

*Distribution*.—Matabili and Mashona Lands; Tatin and Umvuli Rivers (Jameson and Ayres).

*Habits*.—A few individuals of this species were met with by the Jameson expedition to Matabili Land in 1881; on the banks of the Umvuli, amongst rough cover, feeding on grass-seeds, in August; and on the Tatin river, in pairs, in December.

*Rhodopygia rendalli*

815 49. **Lagonosticta brunniceps.** *Little Ruddy Waxbill.*

*Estrela minima*, Layard, *B. S. Afr.* p. 197 (1867).

*Lagonosticta minima*, Gurney in Andersson's *B. Damara Land*, p. 176 (1872); Sharpe, ed. Layard's *B. S. Afr.* p. 476 (1884).

*Lagonosticta brunniceps*, Sharpe, *Cat. B. M.* xiii, p. 277 (1890); Shelley, *B. Afr.* i, p. 31 (1896).

*Description. Adult male*.—Above; crown and nape brown; back brown tinged with crimson; lower back, rump and upper tail-coverts deep crimson; wing-coverts brown with crimson margins; primary coverts and quills brown edged with olive; tail black tinged with crimson on the outer webs; ear-coverts, face, throat and breast crimson, merging into brown on the flanks, abdomen and under tail-coverts; axillaries and under wing-coverts silky white tipped with brown.

Iris crimson; upper mandible reddish-brown; lower rose-red; feet pale brown.

Length 3.50; wing 1.90; tail 1.40; tarsus 0.50; culmen 0.40.

*Adult female*.—Above; crown, neck, back and wings uniform brown; rump and upper tail-coverts crimson; tail black, tinged with crimson; lores and slight eyebrow crimson; ear-coverts and face greyish-brown; below brownish with numerous small white dots on the breast; chin and centre of abdomen buffish; under wing-coverts buff and white.

Iris crimson; upper mandible dusky-red; lower rose-red; feet pale brown.

807 *Pytilia afra* *New faces Finch*



Length 3·30; wing 1·90; tail 1·40; tarsus 0·50; culmen 0·40.

*Distribution*.—From the south of Natal northward through Zululand and the Transvaal to the Zambesi River, thence to Abyssinia, Central Africa and Senegambia. Rare in Damara Land, according to Andersson.

*Habits*.—These little Waxbills are somewhat common in the Transvaal between Potchefstroom and the Limpopo River, in small flocks, or perhaps more often in single pairs. They feed on the ground, almost exclusively on grass-seeds, keep close together when feeding, and are gentle and affectionate in their manners. While hopping about on the ground they constantly repeat a soft twittering note, which is changed to a sharper call when they take flight. Like many of the South African small birds they breed very irregularly, in the Transvaal both in summer and winter. A nest taken towards the beginning of June was placed on the ground in the centre of a tuft of grass. It was domed, with a small side entrance, and was loosely woven from coarse dry grass lined with feathers. It contained three white eggs averaging  $0\cdot56 \times 0\cdot45$ .

810 *Hypargus* *81081*  
50. *Lagonosticta niveoguttata*.<sup>us</sup> Peter's Ruddy Waxbill.

*Spermospiza guttata* (nec Vieill.) Bianconi, spec. Zool. Mosamb. pt. xviii, p. 326 (1867).

*Spermophaga niveiguttata*, Peters, Jour. f. Orn., 1868, p. 133.

*Hypargus niveiguttatus*, Shelley, P. Z. S. 1881, p. 588, pl. 52, fig. 2; id. B. Afr. i, p. 32 (1896); Sharpe, ed. Layard's B. S. Afr. p. 477 (1884).

*Lagonosticta niveiguttata*, Sharpe, Cat. B. M. xiii, p. 274 (1890).

*Spermophaga nigro-guttata* (lapsu), W. L. Sclater, Ibis, 1899, p. 111.

*Lagonosticta niveo-guttata*, W. L. Sclater, Ibis, 1899, p. 285.

*Description*. *Adult male*.—Crown ash-brown; nape brown tinged with crimson; black and wing-coverts chocolate-brown; quills dusky, externally chocolate-brown; rump and upper tail-coverts crimson; two centre tail-feathers dusky tinged with crimson, the others black, the outer webs tinged with crimson; lores, eyebrow, sides of face and neck, throat and upper breast deep crimson; rest of lower surface black; the under tail-coverts tinged with crimson, the sides dotted with numerous round spots of white; edge of wing dusky; under wing-coverts white.

Iris blue-black; bare skin of lids turquoise-colour (Francis); bill bluish; legs and feet lead-grey.

sol. *Cryptospiza reichenowii*  
Red-faced Green Waxbill

Length 5·50; wing 2·20; tail 2·00; tarsus 0·60; culmen 0·37.

*Adult female*.—Browner than the male; throat brown tinged with crimson; breast brown slightly tinged with red and spotted with white.

*Distribution*.—From Inhambane in Gazaland, where, according to Mr. H. F. Francis, it is not uncommon, to the Zambesi (Kirk); Nyasaland (Whyte); Malindi, the Usambara hills and Zanzibar in East Africa (Kirk); extending to the Great Lakes of Central Africa.

*Habits*.—Mr. H. F. Francis writes of the habits of this species near Inhambane as follows: "It frequents thick undergrowth, and apparently finds its food among the leaves on the ground, as it is generally seen scratching about there."

809 51. *Lagonosticta margaritata*. <sup>two</sup> *Verreaux's* <sup>Spotted</sup> *Ruddy Waxbill*.

*Spermophaga margaritata*, *Strickl. Ann. and Mag. Nat. Hist.* xiii, p. 418, pl. 10 (1844).

*Estrela margaritata*, *Layard, B. S. Afr.* p. 198 (1867).

*Hypargus margaritatus*, *Finsch and Hartl. Vög. Ostaf.* p. 449 (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 476 (1884); *Shelley, Ibis*, 1886, p. 317; *id. B. Afr.* i, p. 32 (1896).

*Lagonosticta margaritata*, *Sharpe, Cat. B. M.* xiii, p. 275 (1890).

*Description. Adult*.—"The whole upper parts of this bird are rich ferruginous brown, except the quills, which are dusky within; the upper tail-coverts and outer margins of the rectrices dull vinous red, and their inner webs and apical portions black. The circuit of the eyes, cheeks, throat and breast pale claret red, rest of lower parts deep black, spotted next the breast and on the sides with large pearl-like spots the colour of peach-blossom, of which two are placed transversely and subterminally on each feather" (Strickland).

Total length 4·75; beak to gape 0·45; to front 0·40; width 0·20; height 0·25; wing 2·10; tarsus 0·60.

*Distribution*.—In "The Annals and Magazine of Natural History" (vol. xiii, p. 418) Mr. H. E. Strickland writes: "This beautiful little bird was purchased at Cape Town, and was said to have been brought from Madagascar."

Dr. Sharpe writes in his edition of "Layard's Birds of South Africa" (p. 476): "Mr. J. Verreaux, however, assures us that his specimens, whence the figure in Des Mur's 'Iconographie' was

taken, was killed by himself with a samputan (or blow-pipe) in his garden in Staalplein in Cape Town. It has not occurred since to our knowledge."

This species has never been obtained in Madagascar, and M. Verreaux's Cape Town specimens are the only ones known.

### Genus III. **ESTRILDA.**

*Type.*

**Estrela**, Swains. *Zool. Journ.* iii, p. 349 (1827) ..... *E. astrild.*

Bill moderately strong, conical, and broad at the base, with the culmen sloping, and the sides compressed to the tip, which is slightly emarginated; the gonys long, and advancing upwards; the nostrils basal, lateral, and very small, usually hidden by the frontal plumes. Wings rather short, with the first quill minute; the second nearly as long as the third and fourth, which are equal and longest. Tail more or less lengthened, usually longer than the wing, and rounded or graduated. Tarsi rather shorter than the middle toe, slender, and covered in front with transverse scales. Toes long and slender, the inner toe shorter than the outer; the hind toe long and slender: the claws long, curved, and very acute. Plumage variable. Size small.

The genus *Estrilda* contains a number of small, finch-like weavers of very variable colours, popularly known as Waxbills from the prevailing red colour of their bills; to the Dutch Colonists as Roodebecs or Roibeckies for the same reason. They frequent the veldt, fields, and more open bush, and feed on the ground on grass and other small seeds, in summer on small spiders and insects in addition. Frequently in winter they congregate in large flocks. They build domed nests of grass on the ground or in bushes, and lay four or five white eggs. Several hens of the common *Estrilda astrilda* are said to lay in the same nest, and from eight to fourteen eggs are found in nests of this species. The *Estrildæ* range throughout Ethiopia and Southern Arabia, and some of the species have been introduced into St. Helena, Madagascar, and Mauritius.

#### *Key to the Species.*

- a. Wing shorter than, or not exceeding, the tail in length.
- a<sup>1</sup>. Rump and upper tail-coverts brown barred with black and whitish ..... *E. astrilda*, p. 98.



- b<sup>1</sup>. Rump and upper tail-coverts crimson.  
   a<sup>2</sup>. Sides of face and ear-coverts black..... *E. erythronota*, p. 100  
   b<sup>2</sup>. Sides of face and ear-coverts grey ..... *E. incana*, p. 101.  
 c<sup>1</sup>. Rump and upper tail-coverts blue.  
   c<sup>2</sup>. Sides of face blue; throat and breast blue... *E. angolensis*, p. 102.  
   d<sup>2</sup>. Sides of face lilac; throat and breast chest-  
     nut brown ..... *E. granatina*, ♂, p. 104.  
   e<sup>2</sup>. Sides of face lilac; throat whitish; breast  
     tawny buff ..... *E. granatina*, ♀, p. 104.  
 b. Wing longer than the tail.  
   d<sup>1</sup>. Throat orange-yellow ..... *E. subflava*, p. 105.  
   e<sup>1</sup>. Throat black ..... *E. dufresnii*, ♂, p. 107.  
   f<sup>1</sup>. Throat grey ..... *E. dufresnii*, ♀, p. 107.

*astrild*

## 52. *Estrilda astrilda*. Common Waxbill.

*Loxia astrild*, Linn. *Syst. Nat.* i, p. 303 (1766).

*Estrelida astrild*, Swains. *Zool. Journ.* iii, p. 349 (1827); Layard, *B. S. Afr.* p. 196 (1867); Gurney in Andersson's *B. Damara Land*, p. 178 (1872); Holub and Von Pelz. *Beitr. Orn. Südaf.* p. 126, fig. (1882); Sharpe, ed. Layard's *B. S. Afr.* pp. 470, 849 (1884); Shelley, *B. Afr.* i, p. 29 (1896).

*Estrilda astrilda*, Sharpe, *Cat. B. M.* xiii, p. 391 (1890); Butler, *Foreign Finches*, p. 142, pl. (1894).

"Roodebec" (Red-bill) and "Rooibeckie" of Dutch Colonists.

"St. Helena Waxbill" and "St. Helena Pheasant" of Dealers.

*Description.* *Adult male*.—Above, brown finely barred with cross-lines of dusky; rump and upper tail-coverts tinged with red; tail-feathers dark brown, their edges paler, their bases tinged with red, the centre feathers obscurely barred; scapulars, lesser and middle wing-coverts like the back; the primary coverts and secondaries more coarsely barred with darker brown; primaries uniform brown; crown barred like the back; a streak of crimson through the eye; ear-coverts light grey; cheeks and throat light grey tinged with pink; vent and under tail-coverts black; rest of under surface very light grey tinged with pink, most deeply on the centre of lower breast and abdomen, and closely barred throughout with narrow lines of brown; axillaries and under wing-coverts buff very finely barred with brown; under surface of quills dusky, the inner webs grey.

Iris brown; bill red; legs and feet brown.

Length 4.75; wing 2.00; tail 2.15; tarsus 0.60; culmen 0.35.



*Adult female*.—Less tinged with pink below and generally duller in colour than the male.

In autumn both sexes are less barred on the lower surface.

*Young*.—When newly hatched covered with bluish down; when fledged very like the adult, but with the bill black.

*Distribution*.—South Africa and Angola; introduced into St. Helena, Madagascar and Mauritius. Very abundant throughout the greater part of Cape Colony, Natal, the Orange Free State and the Transvaal, becoming less numerous in Matabili and Mashona Lands. Andersson writes: "This pretty little species is common in the southern districts of Damara Land, and in some parts of Great Namaqua Land, as well as at Lake Ngami;" Monteiro describes it as being "very abundant in Angola, particularly to the south."

*Habits*.—The "Roodebec" may be found nearly everywhere in South Africa, excepting only the higher mountains and the forest districts, but is most abundant in somewhat open localities, such as grass-pastures, fields in which plenty of weeds are growing, gardens and the outskirts of towns and villages—localities in which an abundance of small seeds are to be picked up. In autumn and winter this species sometimes congregates in immense flocks, often mingled with other species of Weaver Birds and Finches. This, like the other Waxbills, feeds chiefly on grass seeds, but also on the seeds of various weeds, on millet, and other small grain. In summer they vary their diet with small insects, the young being chiefly fed with small larvæ, spiders, and soft insects. When feeding on the ground, and also when flying or going to roost, these little birds keep up a constant shrill "chirruping." The male in spring has a rather loud "warbling" song, of six notes according to Dr. Butler. Great numbers of these Waxbills are exported to Europe as cage-birds, chiefly from St. Helena, where they have increased enormously since their introduction many years ago; to such an extent is this the case that they are now known to dealers in cage-birds as St. Helena Waxbills or St. Helena Pheasants. Layard writes regarding this species: "They breed in communities, and it is said that several inhabit the same nest, laying and sitting in it promiscuously, and sometimes three or four together. The nest is a large structure, composed of straw, grasses, feathers, wool, paper, rags, &c. It is often as large as a stable bucket, round, and with an entrance in the side. The interior is a mass of feathers, and the eggs,

821 B. E. - a. *Damarensis* Damara waxbill  
821 C. E. - a. *Cavendishi* Mozambique ~

from eight to fourteen in number, are pure white." Atmore remarks: "You know what a funny wisp of a nest it makes, and how carefully concealed; but how such small birds carry such large bents of grass is a puzzle. The inside is very warm and comfortable, and what may be called the framework of the nest is very nicely contrived, so that all the ear-ends of the grasses are woven together to form a pipe where the entrance is. The nest was in a thicket of brambles and ferns, about six inches from the ground. Even after the bird flew out it required a good search before I could find it. There were twelve eggs in it (whether more than one lays in a nest I cannot say, but only one flew out), they were in all stages of incubation—two not set, and four or five had young birds; so large I could not blow them."

Although several hens occasionally lay in the same nest, this is, according to my own experience, by no means always the case. More usually the nest is constructed by a single cock and hen, who both help in the building, and who generally sit alternately on the eggs; but at night, and occasionally by day, together. The eggs laid by a single hen are from three to five in number. They are pure white in colour; in shape usually elongated ovals, averaging  $0.60 \times 0.35$ .

*Brunhilda*

819 53. **Estrilda erythronota.** *Black-faced Waxbill.*

*Fringilla erythronota*, Vieill. *Nouv. Dict.* xii, p. 182 (1817).

*Estrela lipiniana*, Smith, *Rep. Expl. Centr. Afr.* App. p. 49 (1836).

*Estrela erythronota*, Gray, *Gen. B.* ii, p. 368, pl. 90, fig. 1 (1849);

*Layard*, *B. S. Afr.* p. 198 (1867); *Gurney in Andersson's B.*

*Damara Land*, p. 178 (1872); *Sharpe*, ed. *Layard's B. S. Afr.*

p. 473 (1884); *Shelley, Ibis*, 1886, p. 329.

*Estrilda erythronota*, *Sharpe, Cat. B. M.* xiii, p. 397 (1890); *Shelley,*

*B. Afr.* i, p. 30 (1896).

*Description. Adult male.*—Above, crown, nape, sides of neck and back grey tinged with red and barred with fine lines of brown; lower back, rump and upper tail-coverts crimson; tail black; wing-coverts like the back but more coarsely barred; quills brown, the outer webs with darker bars; lores, eyebrow, face and chin black; below grey tinged with crimson, and barred with brown on the breast, merging into black on the under tail-coverts, which are tipped with white; axillaries, under wing-coverts and inner webs of quills pale grey; edge of wing mottled with brown.

Iris reddish ; bill black, bluish at base ; feet black.

Length 4·60 ; wing 2·10 ; tail 2·35 ; tarsus 0·55 ; culmen 0·35.

*Adult female*.—Slightly duller in colour.

*Young*.—Browner, with less crimson in their plumage.

*Distribution*.—South Africa to the north of the Orange and Vaal Rivers, ranging northward through Great Namaqua and Damara Land to Lake Ngami ; very generally distributed in the Transvaal, Bechuanaland and Rhodesia, extending as far north as Masai Land and Central Africa.

*Habits*.—Very like those of the common *E. astrilda*. In the Transvaal during winter these pretty little birds feed on the ground in small flocks, generally near bushes, to which they fly if disturbed. Their food consists almost entirely of grass seeds. They have a low, gentle twittering note, frequently repeated when they are searching for food and also as they take flight. Towards spring the flock break up and they remain in pairs until the following autumn.

*Plaucestrilda*

880 54. **Estrilda incana.** *South African Grey Waxbill.*

*Estrela incana*, Sundevall, *Æfvers*, 1850, p. 98 ; *Layard*, *B. S. Afr.* p. 197 (1867) ; *Sharpe*, ed. *Layard's B. S. Afr.* p. 470 (1884) ; *Shelley*, *Ibis*, 1886, p. 329.

*Lagonosticta incana*, *Sharpe*, *Cat. B. M.* xiii, p. 284 (1890).

*Estrilda incana*, *Shelley*, *B. Afr.* i, p. 30 (1896).

*Description. Adult male*.—Above blue-grey ; the lower back, rump, and upper tail-coverts crimson ; outer web of quills like the back, inner web dusky, the primaries edged with grey ; tail blackish ; forehead, streak through eye and chin black ; lores, face, and throat grey ; breast and abdomen deeper grey ; under tail-coverts blackish ; axillaries pale grey ; under wing-coverts white.

Iris red ; bill grey ; feet black.

Length 4·00 ; wing 1·95 ; tail 1·95 ; tarsus 0·60 ; culmen 0·35.

*Adult female*.—Resembles the male in plumage.

*Distribution*.—On the east coast of South Africa from Natal to Mosambique and Nyasaland. Not rare near Durban and Pinetown in Natal and Eschowe in Zululand. Between Lake Nyasa and Tanganyika (*Shelley*).

*Habits*.—Captain *Shelley* found this Waxbill nesting in Natal ; he writes in the *Ibis* : "Although it is far from common at Durban, on the 8th of March I took one of their nests containing two pure white eggs. It was placed in a creeper overhanging the



footpath, and was easily reached from the ground; in structure it was very similar to that of *Estrilda astrild*, though smaller and less compact, though made of the small materials." The Messrs. Woodward met with it in Zululand, nesting in a small tree in the open country. The nest, built of grass lined with feathers, contained six very small white eggs.

I have on several occasions found the nest of this species near Pinetown in Natal, built both in bushes and low trees. It is domed, loosely constructed of dry grass and lined with feathers. The eggs, from four to six in a clutch, are laid in December and March, for these birds are double brooded. They are pure white, and average  $0.54 \times 0.42$ .

The Grey Waxbill is nearly always in pairs, is very tame, and feeds on the ground on grass-seeds and small insects. Its note is a soft "chirrup."



*Estrilda angolensis*

87

*Uraeginthus angolensis*

55. **Estrilda angolensis.** *Blue-breasted Waxbill.*

*Angola*

*Fringilla angolensis*, Linn. *Syst. Nat.* i, p. 323 (1766).

*Estrela benghala*, Layard, *B. S. Afr.* p. 199, pt. (1867).

*Mariposa cyanogastra*, Gurney in Andersson's *B. Damara Land*, p. 179 (1872).

*Mariposa phænicotis*, Holub and Von Pelz. *Beitr. Orn. Südaf.* p. 129 (1892).

*Uraeginthus cyanogastra*, Sharpe, ed. Layard's *B. S. Afr.* pp. 473, 850 (1884).

*Estrilda angolensis*, Sharpe, *Cat. B. M.* xiii, p. 402 (1890).

*Granatina angolensis*, Shelley, *B. Afr.* i, p. 29 (1896).

"Cordon Bleu" of Bird Fanciers.

*Description.* *Adult male* (Orange River).—Above, crown, nape, sides of neck, back and wing-coverts reddish-brown; quills brown with paler edges; lower back, rump and upper tail-coverts light blue; tail dark blue; lores, eyebrow, ear-coverts and cheeks light

87<sup>2</sup> *U. a. Damarensis* *Damara Blue w*



blue; below, throat, breast, sides and flanks light blue; thighs, centre of abdomen, under tail and wing-coverts light brown.

Iris reddish-hazel; bill lilac, the tip black; legs and feet pale brown.

Length 4·75; wing 2·00; tail 2·10; tarsus 0·60; culmen 0·40.

*Adult female*.—Resembles the male in plumage, but is a little smaller.

*Young*.—According to Dr. Russ the downy young are of a soft blue-grey colour. At a later stage they resemble the female, "but are only soft blue on the breast, sides, rump and upper tail-coverts." The irides, bill, legs and feet black. The change of colour takes place between the fifth and eighth week.

*Estrilda angolensis* only differs from the common *Estrilda phænicotis*, Swains. of West, Central, and East Africa, in the male not having the posterior ear-coverts crimson, as in the latter. The females resemble one another.

*Distribution*.—Fairly common in Natal, Zululand, and Swaziland; abundant throughout the greater part of the Transvaal, as in the neighbourhood of Rustenburg, ranging into Portuguese East Africa, Matabili and Mashona Lands, and extending north of the Zambesi into Nyasaland and Mosambique. In Cape Colony and the Orange Free State in the Orange River Valley; ranging northward through Bechuanaland to Lake Ngami and the Okavango River, but not reaching Damara or Great Namaqua Land, according to Andersson.

*Habits*.—These beautiful little Waxbills are usually met with in small parties, but occasionally in autumn, after the young have flown, in very large flocks. They prefer localities which are partly open, partly overgrown with scrub or low trees, and are specially fond of scattered mimosa bushes, in which they can take refuge if disturbed when feeding on the ground on their favourite grass-seeds. When frightened they rise with a shrill twittering to take shelter in the nearest bushes. In spring both male and female sing not unpleasantly. Although the adults appear to subsist entirely on grass-seeds, the young, before they leave the nest, are fed on small grubs and insects. The nest is invariably built in a bush, often in a low mimosa, and is generally placed in a fork at a height of from three to eight or nine feet. At first sight it looks like a ball of dried grass carelessly thrown into a bush; on investigation a small side entrance, nearly concealed by the projecting ends of grass-stalks, may be found, leading to the interior which is smoothly and warmly lined with finer dried grass and feathers. Three or four

eggs are laid. These are pure white, and rather round in shape. They average 0.70 by 0.55. Mr. Andersson found this Waxbill nesting in Ondongo. A nest taken by him on the 2nd February, 1867, was constructed of grass, and had no internal lining. It was built in a palm bush, six feet from the ground; the eggs were five in number.

88 *Granatina* *Waxbill*  
 56. **Estrilda granatina.** Grenadine Waxbill.

*Fringilla granatina*, Linn. *Syst. Nat.* i, p. 318 (1766).

*Estrellda granatina*, Layard, *B. S. Afr.* p. 199 (1867).

*Uræginthus granatinus*, Gurney in Andersson's *B. Damara Land*, p. 180 (1872); Holub and Pelzeln, *Orn. Südaf.* p. 129 (1882); Sharpe, ed. *Layard's B. S. Afr.* pp. 474, 850 (1884).

*Granatina granatina*, Sharpe, *Cat. B. M.* xiii, p. 403 (1890); Butler, *Foreign Finches*, p. 130, pl. (1894); Shelley, *B. Afr.* i, p. 29 (1896).

*Description.* *Adult male.*—Forehead and slight eyebrow blue; crown, neck all round, breast and flanks chestnut brown; back and wing-coverts paler chestnut brown; spot before eye black; sides of face, ear-coverts and cheeks lilac; throat black; lower back and centre of abdomen greyish-black; rump, upper and under tail-coverts bright blue; wings brown, the under coverts reddish-buff; tail-feathers black edged with blue.

Iris red; bare skin round eye reddish; bill red at tip, purple at base; legs and feet purplish.

Length 5.80; wing 2.25; tail 2.80; tarsus 0.65; culmen 0.45.

*Adult female.*—Head ash-brown tinged with chestnut-red; throat white; rest of under surface reddish-buff; there is less blue on the forehead and a duller lilac on the sides of face than in the male; rest of plumage like the male.

*Young.*—Like the female, but browner.

*Distribution.*—From Griqualand West and the Southern Transvaal to the Zambesi River, the Lake Ngami District and Damara Land.

*Habits.*—These beautiful Waxbills appear never to congregate in large flocks, but are either met with in small parties of five or six, or more usually in pairs. They keep much to localities covered with low bushes, and especially with scattered mimosas, and generally feed on the ground between the bushes, often on bare spots, on grass- and other small seeds.

A nest taken in June, in the Northern Transvaal, was built about four feet off the ground in a thorny bush. It is round in shape, with a side entrance, and is loosely constructed of dry grass lined with a few feathers. The eggs, three in number, are pure white and measure  $0.72 \times 0.50$ . It is somewhat curious that this delicate-looking little bird should breed in mid-winter, when the nights are decidedly cold, but I have frequently noticed the seeming indifference of many of the South African small birds—including some of the Sunbirds—to temperature. Many breed in mid-winter, even on the bleak mountains of Western Cape Colony. Not unfrequently the same species will nest again in the height of summer.

The Grenadine or Violet-eared Waxbill is occasionally imported into Europe as a cage-bird. It is said to have a gentle yet lively disposition and a lovely song. Dr. Russ writes: "The first living bird of this species which was brought to Europe must have been that received in Paris in 1754 by the Marquise de Pompadour. She was known to be an enthusiastic friend of foreign birds, and kept this Astrild alive for three years."

*Thamnia* *darkei*  
 57. **Estrilda subflava**, *Orange-breasted Waxbill*.

*Fringilla subflava*, Vieill. *N. Dict. d'Hist. Nat.* xxx, p. 575 (1819).

*Amadina sanguinolenta*, Gray, *Genera B.* ii, pl. 90, figs. 2, 3 (1849).

*Estrilda subflava*, Gray, *Genera B.* ii, p. 369 (1849); *Layard, B. S. Afr.* p. 200 (1867); *Sharpe, ed. Layard's B. S. Afr.* pp. 469, 849 (1884).

*Sporæginthus subflavus*, Sharpe, *Cat. B. M.* xiii, p. 324 (1890); *Butler, Foreign Finches*, p. 114, pl. (1894).

*Estrilda subflava*, Shelley, *B. Afr.* i, p. 30 (1896).

"Zebra Waxbill" of dealers in Cage Birds.

*Description. Adult male*.—Above olive-brown; wing-coverts like the back; rump and upper tail-coverts crimson; quills brown; tail feathers dusky-brown, the outer slightly tipped with white; lores and eyebrow crimson; sides of face, ear-coverts and cheeks grey tinged with yellow; below, orange-yellow streaked with orange-red on the lower throat, barred with black and yellow on the sides of breast, body and flanks; chin bright red; vent and under tail-coverts strongly tinged with crimson; axillaries and under wing-coverts buffish; edge of wing mottled brown and yellow.



Iris red-brown; bill crimson, the ridge and gonys black; legs and feet flesh-coloured.

Length 3·80; wing 1·80; tail 1·35; tarsus 0·50; culmen 0·35.

The amount of orange-red on the lower surface of body increases with age. An older male has the under surface of body, below the throat, of a bright scarlet; the sides and flanks barred with olive and pale red; under tail-coverts deep scarlet; sides of face orange-red.

*Adult female*.—Has no crimson eyebrow; sides of face olive-brown like the head; under surface of body yellow, only the under tail-coverts scarlet.

Length 3·50; wing 1·70; tail 1·20.

*Young male*.—Resembles the female on the under surface of body.

*Distribution*.—Locally distributed throughout the Ethiopian Region. Resident in Natal and the Transvaal. Not found in Cape Colony or on the west coast of South Africa.

*Habits*.—These very beautiful little Waxbills differ somewhat in their habits from the common *Estrilda astrilda*. They prefer the borders of streams and marshes, where there is a thick growth of bushes and reeds, to the more open grass lands, and they are much shyer and more easily alarmed. In Natal, where they are not uncommon from May to December, I have generally met with them in flocks of no great size, feeding on the ground on grass-seeds, but taking refuge in bushes if disturbed. When feeding they keep up a continuous chirping.

This species, which is known to dealers as the “Zebra Waxbill” from its striped sides, is a common and favourite cage-bird in Europe. Under favourable conditions it breeds very readily in confinement and is wonderfully prolific. A pair in the aviary of Dr. Rey, of Halle, hatched out fifty-four young in the course of a single year; not content with this, the hen laid an additional sixty-seven eggs which were taken from her. The following account of this species in confinement, by Dr. Russ, is from Dr. Butler’s “Foreign Finches in Captivity”:—

“The love-dance is comical; the song scarcely more than a sparrow-like, yet not inharmonious chirp, repeated an innumerable quantity of times in the early morning during the nesting season. Nest in a little Hartz cage, with basket nest, or in a little lined nest-basket, or in a very small Frühauf’s nest-box open in front, always high up: somewhat negligent, as compared with those of the nearly allied Astrilds; of strips of paper and bast, cotton threads,



fibres and hay-stalks loosely thrown together, arched over, with a lateral, broad, and scarcely rounded entrance; inside, on the contrary, rather carefully lined with horse-hair, wadding, and soft feathers. Laying three to four, even sometimes seven to nine eggs, which are incubated alternately by the male and female for two hours at a time. Nestling down yellowish-white. Expansions of the beak yellowish-white. Young plumage bright yellowish-grey, to be distinguished by the weak but clearly perceptible reddish-yellow colouring of the croup; little beak shining black; eyes dark brown; feet black-brown."

The eggs of this species are pure white, and measure on the average  $0.52 \times 0.40$ .

83 *Coccyzygia* *Owee*  
58. **Estrilda dufresnii.** *Dufresne's Waxbill.*

*Fringilla dufresnii*, Vieill. *N. Dict. d'Hist. Nat.* xii, p. 181 (1817).

*Fringilla melanotis*, Temm. *Planches Col.* ii, pl. 221, fig. 1 (1833).

*Estrellda dufresnii*, Gray, *Gen. B.* ii, p. 369 (1849); *Layard, B. S. Afr.* p. 197 (1867); *Sharpe, ed. Layard's B. S. Afr.* pp. 469, 849 (1884); *Shelley, Ibis*, 1886, p. 330.

*Estrellda melanogenys*, Sund. *Cefv. K. Vet-Akad. Stockh.* 1850, p. 97; *Layard, B. S. Afr.* p. 196 (1867).

*Coccopygia dufresnii*, Sharpe, *Cat. B. M.* xiii, p. 305 (1890); *Shelley, B. Afr.* i, p. 29 (1896).

*Description.* *Adult male* (Swellendam).—Above, crown and back of neck grey; back and wing-coverts olive-colour; rump and upper tail-coverts scarlet; tail black; inner secondaries olive tinged with crimson; rest of quills dusky, edged with olive; the greater coverts tinged with crimson; lores, ear-coverts, sides of face, cheeks, and upper throat black; sides of neck and under-surface of body dull whitish, tinged with grey on the breast, sides, and flanks, with brownish on the abdomen and under tail-coverts; under wing-coverts buff; under surface of quills dusky, their inner margins yellowish.

Iris red; upper mandible black; the lower red; legs and feet dark brown.

Length 3.80; wing 1.75; tail 1.50; tarsus 0.55; culmen 0.35.

*Adult female.*—Differs from the male in having the face and throat pearl-grey instead of black, and in being smaller.

Length 3.60; wing 1.90; tail 1.35.

*Distribution.*—Eastern South Africa; occurring as an autumnal

804 *C. - Kolumensis East of Owee Wash*

migrant as far west as the George District, and at Heidelberg and Swellendam in Western Cape Colony. It becomes more common to the east of Port Elizabeth and Grahamstown. In Natal and the Transvaal it is a resident, and extends as far north as the Zambesi River, ranging into Nyasaland, where Mr. Whyte obtained examples on the Milanji Plateau in November. It has not been recorded from the West Coast or from Great Namaqua or Damara Lands.

*Habits.*—In Natal this pretty little species is, when not breeding, usually met with in small parties of ten or twelve, feeding on the ground on grass-seeds. When searching for food they keep close together, and constantly utter a sharp, chirping call-note. If disturbed they rise simultaneously with a prolonged “chirrup” and fly for a short distance to settle again on the ground. This Waxbill breeds in Natal not uncommonly, but not, so far as I have observed, near the coast. Not far from Howick, at a height of about 3,000 feet, I have met with their nests in some numbers. Unlike many of the Waxbills, they build in tall bushes and young trees, at a height of from six to ten feet. The nests are rough-looking, oval structures, with an entrance hole on one side, constructed of fine dry grass. The flowering ends of the grass being woven together, the stiff stalks are left projecting in all directions. The interior is lined with grass tops, down, and feathers. The eggs are very small, pure white in colour, and four or five in number. When first hatched the young are fed on small caterpillars.

#### Genus IV. **ORTYGOSPIZA.**

*Type.*

**Ortygospiza**, *Sundev. Cefv. K. Vet.-Akad.*

*Stockh.* 1850 ..... *O. polyzona*, p. 109.

Bill moderate and pointed, the upper mandible much deeper than the lower; the culmen arched and swollen at the base; the commissure festooned near the base. Nostrils nearly concealed by nasal plumes. Wing longer than the tail. Tail short and square. Tarsi scutellated anteriorly. Plumage: flanks and sides of body brown barred with black and white. Size small; wing about 2·10.

Established by Sundevall for the reception of two African Weaver Finches, of which one is fairly common in many parts of South Africa. They feed much on the ground on small seeds; are generally, when not breeding, in flocks, and have much the habits of the Waxbills. They build loosely constructed domed nests in tufts of grass, of dry grass lined with feathers, and lay white eggs.

872 59. *Ortygospiza polyzona*. *Quail Finch* *Bar-breasted Weaver Finch*.

*Fringilla polyzona*, Temm. *Pl. Col.* ii. pl. 221, fig. 3 (1823).

*Estrela polyzona*, Des Murs, *Lefebvre's Vog. Abyss.* p. 117 (1845);  
*Layard*, *B. S. Afr.* p. 198 (1867).

*Ortygospiza polyzona*, Sundev. *Öfv. K. Vet.-Akad. Förh. Stockh.*,  
1850, p. 98; Sharpe, ed. *Layard's B. S. Afr.* p. 457 (1884); *id.*  
*Cat. B. M.* xiii, p. 269 (1890); Shelley, *Ibis*, 1886, p. 337; *id.* *B.*  
*Afr.* i, p. 28 (1896).



*Ortygospiza polyzona*.

*Description. Adult male.*—Above brown slightly mottled with darker brown; wings and tail brown; the outer primary edged with white, the coverts and secondaries with grey; the outer tail-feather edged with white, the next with a white streak; forehead blackish; eyebrow and streak below eye white; sides of neck and ear-coverts grey-brown; cheeks dusky; chin white; throat black; upper breast grey barred with black and white, merging into light chestnut on the lower breast and buff on the abdomen; sides and flanks grey-brown barred with black and white; lower tail-coverts buff streaked with dark brown; axillaries and under wing-coverts buff; under surface of quills dusky with pale inner margins.

Iris bright hazel; bill red; legs and feet very light brown.

Length 3·60; wing 2·00; tail 1·20; culmen 0·60; tarsus 0·40.

*Adult female.*—Resembles the adult male, but the black markings on the head and throat of the former are replaced by greyish-brown; the lower surface of the body is paler, and the breast and sides are barred with brown and dull white.

Length 3·50; wing 2·00; tail 1·20.

*Distribution.*—This little species has a very extensive range in Africa; on the east coast from Abyssinia to Eastern Cape Colony, on the west coast from Senegal to Angola. In South Africa it is fairly common in the north-east of Cape Colony, in the neighbourhoods of Colesberg and Eland's Post. In the Orange Free State and in the higher part of Natal it is resident and common all the year round; it is rather more local but still a common species in

*O. p. braconiformis* sub sp. nov.



many parts of the Transvaal, but becomes rarer to the north of the Limpopo River, in Matabili and Mashona Lands.

*Habits.*—These pretty little birds are usually met with in small flocks, but occasionally in single pairs, on open grassy flats. Here they feed on the ground, under the grass, on the fallen seeds. If disturbed they rise suddenly, with a curious metallic “chirp,” fly a short distance and settle again directly on the ground without first perching on bushes or weeds. As a rule their flight is rapid and direct, but they sometimes rise with their usual sharp cry and fall again on the spot from which they rose. Mr. T. Ayres gives the following account of the nest, found near Potchefstroom on the 30th of April, in the *Ibis* for 1878, p. 297: “This pretty little fellow I shot as he rose from the nest, where he had evidently been doing duty for his wife, by sitting on the eggs in her absence. The nest was a very rough structure, placed on the ground amongst the grass and not easily seen, from its being composed of dead blades of grass; it was lined with a few coarse feathers, and in shape was much like the nests of some of the Sunbirds, with a projecting eave over the entrance, but all very rough. The eggs were five in number and pure white; length, 0.54; breadth, 0.47. Eggs in the South African Museum at Cape Town are rounded ovates, without gloss, and pure white. They average  $0.62 \times 0.48$ .

#### Genus V. SPERMESTES.

*Type.*

**Spermestes**, Swainson, *B. W. Afr.* i, p. 201 (1837) ...*S. cucullatus*.

Bill short, thick, the culmen rounded, the cutting edge of the mandible nearly straight; the nasal orifice concealed by plumes. Tail short, not as long as the wing, and square. Tarsi scutellated anteriorly, the feet long and slender, the claws long and sharp. Plumage of contrasting colours, more or less black and white.

Nine species of African Weaver Finches are included in this genus, three ranging into South Africa. Several of them are regularly exported to Europe as cage-birds, and are known to dealers as “Mannikins.” They breed freely in confinement. They feed on small seeds, resemble the Finches in their general habits, but build domed nests in bushes and trees, and lay white eggs.



*Key to the Species.*

- a.* Larger; wing exceeding 2·25..... *S. fringilloides*, p. 111.  
*b.* Smaller; wing under 2·00.  
*a*<sup>1</sup>. Back brown; a patch of glossy green on the  
scapulars..... *S. scutatus*, p. 112.  
*b*<sup>1</sup>. Back chestnut, contrasting with the black  
head ..... *S. nigriceps*, p. 113.

*Spermestes fringilloides.*

*800* *Amauresthes*  
**60. *Spermestes fringilloides*. Pied Weaver Finch.**

*Ploceus fringilloides*, *Lafr. Mag. de Zool.* 1835, pl. 48.

*Spermestes fringilloides*, *Hartlaub, Orn. W. Afr.* p. 147 (1857); *Shelley, Ibis*, 1886, p. 308; *id. B. Afr. i.* p. 28 (1896).

*Amaurestes fringilloides*, *Sharpe, Cat. B. M.* xiii, p. 267 (1890); *Butler, Foreign Finches*, p. 264, pl. ♂, ♀ (1894).

*Description.* *Adult female*.—Head, nape, sides of neck and face, cheeks and throat glossy black; back and wings brown, the upper back tinged with chocolate-colour and dotted with small round spots of yellow, some of the lesser wing-coverts with white shafts; rump, upper tail-coverts and tail black; under surface of body white, with a patch of black on each side of chest, of rufous on each flank, the sides and flanks streaked with black; outer aspect of thighs black; the abdomen, flanks and under tail-coverts tinged with pale rufous; axillaries and under tail-coverts buff.

Iris dark red-brown; upper mandible blackish, the lower horn-blue; legs and feet blue-black.

Length 5·10; wing 2·40; tail 1·60; tarsus 0·60; culmen 0·60.

*Adult male*.—Resembles the female in plumage, but the black patch on each side of the chest is larger.

*Distribution*.—A resident in Natal, Zululand, Portuguese East Africa and the Eastern Transvaal, extending northward into Nyasaland and German East Africa as far as Zanzibar, and westward into Bechuanaland. In West Africa this species is recorded from Senegambia and the Gambia River district.

*Habits.*—This species is frequently kept in captivity in Europe, and is known to dealers and bird fanciers as the “Magpie Mannikin,” from its contrasting colours of black and white.

I have only occasionally met with this Weaver Finch, nor can I find any record of its habits in a state of nature. The following account of the caged bird by Dr. Russ is from Dr. Butler’s “Foreign Finches in Captivity.”

“The pair is always inseparable, and the male performs precisely the humming, hopping love-dance of the Little Pie” (Bronze Mannikin, *S. cucullata*).

“The nest is constructed in any kind of cavity or even openly in a bush, in the latter case tolerably skilfully built in a rounded form and with a narrow lateral entrance hole, of bast, thread and stalks, and lined with blades of grass, as well as little soft rags, wadding, &c. The laying consists of four to six pure white eggs. The young plumage above is dull uniform chocolate-brown, below whitish grey-brown; beak black; feet blackish-brown. The change of colour begins in about the sixth week, in that the plumage above grows darker and below lighter until finally pure white. After the first year the feathers of the head first show the metallic gloss, and then also the yellow-brown spot on the sides, which is very gradually developed, is fully defined. Many pairs nest readily and productively; others on the contrary, year in year out, make no attempt at nest building.”

The Pied Weaver Finches feed in small parties, on grass and other small seeds; they are fond of dusting themselves, like sparrows, on a road or other bare spot.

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#### 61. *Spermestes scutatus*. Hooded Weaver Finch.

*Coccothraustes scutatus*, *Heuglin, Syst. Uebers*, p. 39 (1856).

*Spermestes scutatus*, *Heuglin, Journ. f. Ornith.* 1863, p. 18;

*Sharpe, Cat. B. M.* xiii, p. 265 (1890); *Shelley, B. Afr.* i, p. 28 (1896).

*Spermestes cucullata* (*nec Swains*), *Sharpe, ed. Layard's B. S. Afr.* p. 456 (1884); *Shelley, P. Z. S.* 1881, p. 587.

*Description.* *Adult male.*—Above ash-brown, the lower back and rump barred with brown and whitish; scapulars steel-green; lesser wing-coverts brown glossed with green; remaining coverts and quills brown edged with grey or white; upper tail-coverts ash-colour; tail blackish; crown glossy steel-green; nape brown; lores, feathers about eyes, sides of face, ear-coverts, cheeks and throat

blackish glossed with green and purple; sides of neck brown; upper breast brownish-black; lower breast and abdomen pure white, a black patch on the sides of body; under tail-coverts white slightly barred with wavy lines of brown; edge of wing dusky; axillaries and under wing-coverts buff.

Iris brown; upper mandible black, the lower ash-colour; legs and feet dark brown.

Length 3·60; wing 1·90; tail 1·20; tarsus 0·50; culmen 0·40.

*Adult female*.—Similar to the adult male in plumage.

*Young*.—Above chocolate-brown; wings dusky-brown; crown, sides of face and ear-coverts sooty-brown; cheeks and throat ash-brown; abdomen dull white; remaining under surface pale reddish-brown.

*Distribution*.—An uncertain and irregular migrant to Eastern Cape Colony, but a resident in Natal, ranging northward through the Transvaal to the Zambesi, thence through Nyasaland to the Congo Region, and as far north as 16° N. Lat. Found also in the Comoro Islands.

*Habits*.—These pretty little Weaver Finches are in Natal usually met with in small parties of from six to a dozen in the more open "Bush" as well as in gardens. They spend much of their time on the ground searching for small seeds, but frequently perch on bushes and occasionally on tall trees. They are shyer than the majority of the small Weaver Finches, and if disturbed once or twice fly off to a distance. Their note is a soft and gentle twitter. A nest found near Pinetown in November was built near the extremity of the lower horizontal limb of a large tree, at the edge of a clearing in the "Bush." It was about ten feet above the ground and was domed, with a small side opening. It was somewhat loosely built of fine dry grass lined with the soft flowering tops. The eggs, four in number, are pure white and measure 0·52 × 0·45.

802. *Lepidopygia* *Chestnut*  
62. *Spermestes nigriceps*. Rufous-backed Weaver Finch.

*Spermestes nigriceps*, Cassin, *Proc. Philad. Acad.* 1852, p. 185; Sharpe, *Cat. B. M.* xiii, p. 263 (1890); Shelley, *B. Afr.* i, p. 28 (1896).

*Spermestes rufodorsalis*, Peters, *Journ. f. Ornith.* 1863, p. 401; Sharpe, *ed. Layard's B. S. Afr.* p. 456 (1884); Shelley, *Ibis*, 1886, p. 309.

*Description*. *Adult male*.—Above chestnut red; rump and upper tail-coverts black, spotted and barred with white; least



wing-coverts and inner secondaries like the back, the others browner, the middle with pale ends; primary-coverts and quills blackish, the coverts edged with chestnut, the outer webs of the quills dotted with white; tail black; crown, nape, sides of face and neck, cheeks, throat and upper chest black; lower breast, abdomen and under tail-coverts white; sides and flanks black, spotted and barred with white; thighs externally black; axillaries and under wing-coverts white; edge of wing mottled black and white.

Iris brown; bill bluish; legs and feet black.

Length 3.50; wing 1.85; tail 1.20; tarsus 0.50; culmen 0.35.

*Adult female*.—Resembles the male.

*Distribution*.—On the east coast of Africa from Zanzibar to Natal (Durban in August); North Nyasaland, June (Whyte).

*Habits*.—Like those of *S. scutatus*.

#### Genus VI. PHILETÆRUS.

*Type.*

*Philetairus*, Smith, *Charlesworth's Mag.* 1837, p. 536.....*P. socius*.

Bill of moderate length, conical and pointed, somewhat deep at the base, the sides compressed, the culmen slightly arched from the base, the lateral margins sinuated. Nostrils exposed and free from nasal plumes; wings moderate, reaching to about the middle



*Philetærus socius.*

of the tail; the first quill very short; the second, third and fourth nearly equal and longest. Tail shorter than the wing and slightly rounded. Tarsi strong, scutellated anteriorly. Toes moderate, the outer and inner equal. Claws much curved and sharp.

The genus *Philetærus* includes four species of African Weaver Finches, including the well-known South African Social Weaver Finch, the wonderful collective nest of which, sometimes containing



several waggon-loads of material, and as large as a moderately sized haystack, has been so frequently described and illustrated by African travellers.

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63. **Philetærus socius.** *Social Weaver Bird.*

*Loxia socia*, *Lath. Ind. Orn.* i, p. 381 (1790).

*Philetærus lepidus*, *Smith in Charlesw. Mag.* 1837, p. 536; *id. Ill. Zool. S. Afr., Birds*, pl. 8 (1838).

*Philetærus socius*, *Layard, B. S. Afr.* p. 186 (1867); *Gurney in Andersson's B. Damara Land*, p. 167 (1872); *Holub and Pelzeln, Orn. Südafr.* p. 119 (1882).

*Philetærus socius*, *Sharpe, ed. Layard's B. S. Afr.* p. 449 (1884).

*Philetærus socius*, *Sharpe, Cat. B. M.* xiii, p. 249 (1890); *Shelley, B. Afr.* i, p. 27 (1896).

*Description.* *Adult male.*—Above brown, the feathers of the nape and upper back edged with buff and with a subterminal margin of black; rump and upper tail-coverts pale brown, the feathers margined with white; two centre tail-feathers light brown; rest of tail-feathers brown externally and at the tips, blackish internally, a spot of white at the end of inner web; wing-quills brown with light edges; crown uniform brown; eyelid white; lores, feathers in front of eye and fore cheeks, chin and upper throat black; sides of face, ear-coverts, hind cheeks and under surface of body pale brown; the sides of neck with scale-like markings like the back; a patch of feathers on each side black with whitish margins; axillaries and under wing-coverts pale brown.

Iris dark brown; bill horn-colour; legs and feet light brown.

Length 5·50; wing 2·90; tail 1·75; tarsus 0·80; culmen 0·50.

*Adult female.*—Resembles the male in colour.

*Young.*—More distinctly mottled above, the feathers edged with greyish-brown; crown with small spots of black; the mottling on the sides of body less distinct than in the adults.

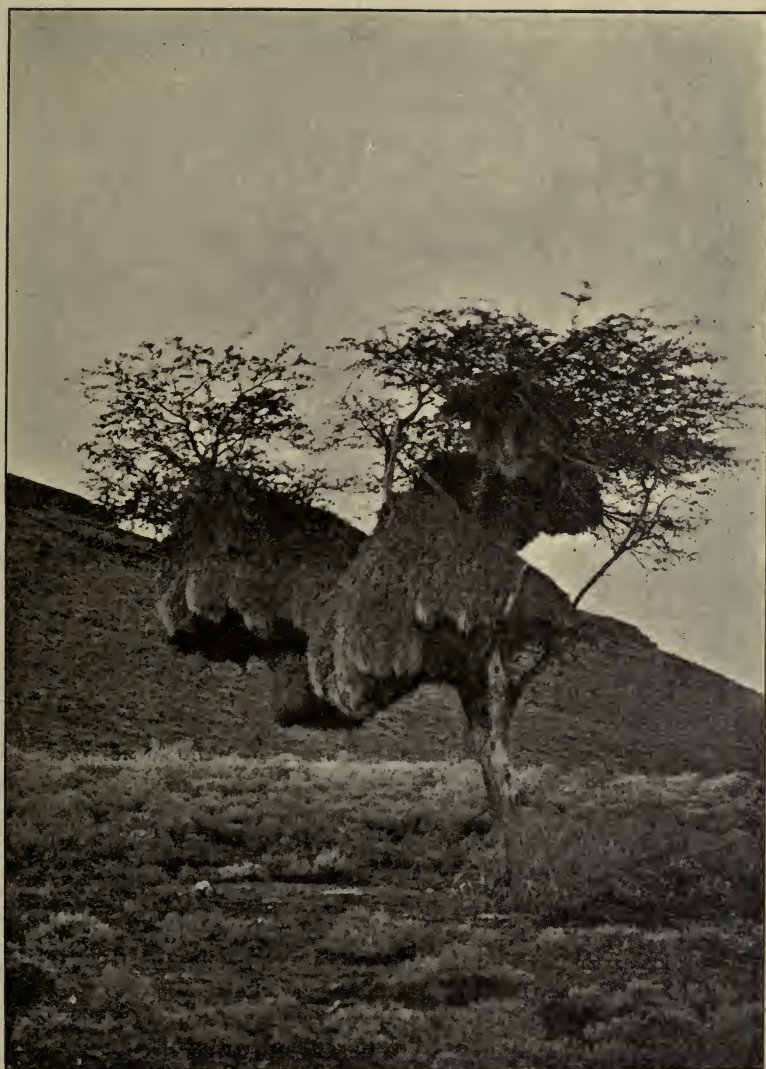
*Distribution.*—From about 20° South Latitude southward to the valley of the Orange River, ranging a few miles south of that river into Cape Colony. Mr. Andersson remarks: "Great Namaqua Land is the head-quarters of this species, and the Orange River is its southern limit; in Damara Land proper it is of somewhat rare occurrence." It is rather a common species in Bechuana

Land and Griqualand West and by no means rare, though somewhat locally distributed, in the Transvaal.

*Habits.*—The great majority of African travellers refer to this little Weaver and its conspicuous and remarkable social nest, which has been, by various authors, compared to an umbrella, a haystack, a native hut, and a variety of other structures. Mr. Andersson remarks on its habits in Damara Land as follows: "It congregates in large flocks, and when breeding, many pairs incubate their eggs under the same roof, which is composed by these birds of whole cartloads of grass piled on a branch of some camel-thorn tree in one enormous mass of an irregular umbrella-shape, looking like a miniature haystack, and almost solid, but with the under surface, which is nearly flat, honeycombed all over with little cavities, which serve, not only as places for incubation, but also as a refuge against rain and wind."

Mr. Ayres remarks that in the Transvaal he "first met with this curious bird near the Vaal River, where there were several colonies amongst the large camel-thorn trees. Their huge nests were very conspicuous at a considerable distance; I first saw them in July, 1869 (midwinter), when the birds, in flocks of from thirty to forty, were still inhabiting their nests, in which they appear to sleep all the year round, adding to them each summer as the colony increases. I visited a nest early one morning and found it apparently deserted; but on throwing a stone or two at it I heard a gentle chattering, and presently out flew a bird, and then another, till the whole family were out. I found them afterwards feeding on the ground at some little distance; on rising they uttered the same chattering note, and continued it during their flight."

Collective nests of this species contain from twenty to more than three hundred separate habitations, which have no communication with one another beyond being under the same roof. Each separate nest is warmly lined with feathers. One of the collective nests is added to, year by year, until either the tree in which it is built gives way, or its branches can afford room for no more material; fresh nests are then built in neighbouring trees by the younger birds, about twenty pairs joining together to work at each. In general habits this species very closely resembles the larger *Ploceipasser mahali*. Like the latter bird it is exceedingly pugnacious, the cocks frequently fighting until they lie exhausted on the ground, surrounded by feathers that have been pulled out during the contest. The Social Weaver feeds chiefly on grass-



NEST OF SOCIAL WEAVER BIRD.



- seeds, occasionally on small berries and also on beetles. The young are at first fed on grubs and other soft insects.

The eggs are three or four in number, and vary a good deal in shape and colour. As a rule they are rounded ovates, but some are very elongated. The ground colour is some shade of drab, and they are more or less spotted all over with small dots of brown and greyish purple. They average  $0.75 \times 0.52$ .

The illustration represents a nest of this species in Griqualand West, and is from a photograph by my friend Dr. Marloth, of Cape Town.

### Genus VII. **AMADINA.**

*Type.*

**Amadina**, Swainson, *Zool. Journ.* iii, p. 349 (1827) ..... *A. fasciata*.

Bill short, acutely conical, very broad at the base, swollen and rounded; the culmen broad, flattened, running to a point on the forehead; both culmen and gonys curved, the edge of the upper mandible festooned towards the base; nostrils basal, sunken, lateral, hidden by frontal plumes. Wings short and rounded, the first quill minute, the second, third, and fourth nearly equal and longest; the inner secondaries elongated. Tail short and square. Tarsi shorter than the hind toe, strong. Toes long and slender, the outer and inner about equal; hind claw long and curved.

The genus contains three species of African Weaver Finches, one occurring in South Africa.

They are very sparrow-like in their habits and actions, build domed nests in bushes or under the roofs of houses, and lay white eggs.

#### 64. **Amadina erythrocephala.** *Red-headed Weaver Finch.*

*Loxia erythrocephala*, Linn. *Syst. Nat.* i, p. 301 (1766).

*Amadina erythrocephala*, Smith, *Ill. Zool. S. Afr. Birds*, pl. 69 (1841); Layard, *B. S. Afr.* p. 200 (1867); Gurney in Andersson's *B. Damara Land*, p. 174 (1872); Holub and Von Pelz. *Beitr. Orn. Südaf.* p. 131 (1882); Sharpe, ed. Layard's *B. S. Afr.* pp. 467, 849 (1884); *id.* *Cat. B. M.* xiii, p. 290 (1890); Shelley, *Ibis*, 1886, p. 313; *id.* *B. Afr.* i, p. 26 (1896).

*Description.* *Adult male.*—Above light ash-grey, the crown and nape streaked and tinged with scarlet; upper tail-coverts

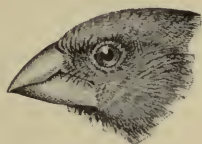
799 *A. fasciata* Crested Finch



barred with black and tipped with white; wings light brown, the coverts and secondaries with narrow black subterminal bars and white tips, the primaries with light edges; tail brown, all but the two central feathers tipped with white; lores whitish; sides of face, chin, and upper throat scarlet; lower throat and sides of neck whitish barred faintly with dusky; breast grey, each feather tipped with black, followed by a broad bar of white and a narrow bar of black, giving the plumage a scaled appearance; sides and flanks with broader bars, the feathers at their bases tinged with reddish; under tail-coverts brown tipped with white and with a subterminal bar of black; edge of wing mottled brown and white; axillaries and under wing-coverts fawn-coloured; under surface of quills light dusky, their inner edges fawn-coloured.

Iris brown; bill brownish; legs and feet flesh-coloured.

Length 5.50; wing 2.90; tail 2.00; tarsus 0.65; culmen 0.50.



*Amadina erythrocephala.*

*Adult female.*—Is smaller, and lacks the red on the face and throat, the latter being whitish barred with brown.

Length 4.80; wing 2.90; tail 1.80; tarsus 0.65; culmen 0.45.

*Distribution.*—Northern Cape Colony, extending as far south as Kenhardt, and ranging into the Orange Free State and the Transvaal, thence through Matabili and Bechuana Lands to the Lake Ngami district. On the west coast through Great Namaqua and Damara Lands into Benguela.

*Habits.*—In nearly all its habits, in its flight, as well as in many of its notes, this Weaver Finch very closely resembles the Cape Sparrow (*Passer arcuatus*). In localities in which both species occur they frequently associate together, and in Damara Land Andersson found them breeding in company, both on trees and under the eaves of his house, their nests being often placed side by side. The Red-headed Weaver Finch is a very social bird, remaining in flocks, often of considerable size, all the year round,

197 *Euphonia gairdneri* Gairdner's Weaver F.

and frequently associating with other ground-feeding birds. When disturbed it flies at once to the shelter of the nearest bush or tree with a twittering note, and remains hidden until the danger is past. The nest, a large and rambling domed structure with a side entrance, resembles that of a sparrow. It is constructed of dry grass, twigs and rootlets with a lining of cotton, wool and feathers, and is usually placed in a bush or tree, and frequently several close together, occasionally under the eaves of a house. On the Orange River the eggs are laid in March. They are pure white, rather elongated and tapering towards the smaller end, and measure  $0.83 \times 0.58$ .

### Subfamily III. VIDUINÆ.

In the *Viduinæ*, as in the *Estrildinæ*, the first primary is minute in size, attenuated towards the end and sickle-shaped. In the former, however, but not in the latter, the mantle is striped in some stage of plumage, some of the inner wing-feathers are usually lanceolate and the tail-feathers are generally obtusely pointed. The hind claw is longer, less curved and more slender. Moreover, the males in the breeding season assume a highly differentiated and decorative plumage totally unlike their winter garb, which resembles that of the females in being of some unobtrusive shades of brown. The change to the breeding-dress is partly by a moult, but chiefly by a change of colour in the existing feathers. The males of many species are in summer decorated with long tails, neck-frills, elongated and erectile feathers on the lower back, in addition to gaudy colours.

All the species of the three genera, *Urobrachya*, *Coliopasser* and *Vidua*, commonly known as Widow, or Whydah Birds, are polygamous, the hens outnumbering the cocks in the proportion of from ten to fifty to one. The *Viduinæ* are confined to Africa. They all have a somewhat indifferent song of a few harsh notes. They feed chiefly on grass and other seeds, but occasionally on insects. The majority build domed nests, woven out of grass and suspended from the stems of grass or reeds, and lay coloured eggs; the *Hypocheræ*, however, build their nests in holes of buildings and lay pure white eggs.

*Key to the Genera.*

- a. Back brownish, the feathers mottled with dark centres. Tail very short and square. The males with no very marked change of plumage in summer *Quelea*, p. 121.
- b. In adult males in summer the back not mottled.
- a*<sup>1</sup>. The males in breeding plumage velvety-black and yellow or scarlet, with neck frills; tail short and square ..... *Pyromelana*, p. 125.
- b*<sup>1</sup>. The males in breeding plumage velvety-black, the lesser wing-coverts orange or scarlet; with neck-frills. Tail short and much graduated and rounded ..... *Urobrachya*, p. 133.
- c*<sup>1</sup>. The males in breeding plumage black; the lesser wing-coverts yellow, orange-scarlet, or black. Tail much lengthened and rounded at the end... *Coliopasser*, p. 136.
- d*<sup>1</sup>. The males in breeding plumage without yellow or red in the plumage, and without bright lesser wing-coverts. Tail square, or square with the exception of the four centre feathers.
- a*<sup>2</sup>. Tail square, with the exception of the four centre feathers which are much elongated ... *Vidua*, p. 143.
- b*<sup>2</sup>. Tail square, without elongated feathers. Entire plumage glossy steel or purple black ..... *Hypochera*, p. 152.

Genus I. **QUELEA.***Type.***Quelea**, *Reichb. Syst. Nat.* pl. 76, fig. 1 (1850).....*Q. quelea*, p. 122.

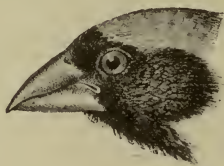
Bill strong, cone-shaped; the culmen gently curved from base to tip; the cutting edges of both mandibles sinuated and with a deflected angle towards the base. Nostrils nearly concealed by nasal plumes. Tail short (about three-fifths the length of wing), square at the end; the outstretched feet reaching its end. Plumage: in winter male and female alike brownish, streaked above and on the flanks with dusky; in summer the old males differ considerably from the females in having the crown, neck and under surface rosy pink. Bill bright red.

About six species and sub species are included in the genus, all confined to Africa; one species and a sub species are found in South Africa.

The Red-billed Weavers feed on the ground in flocks, chiefly on small seeds. They build domed nests of grass in bushes and lay white eggs.

*Key to the Species.*

- a. Forehead, sides of face and upper throat black... *Q. quelea*, p. 122.  
 c. Forehead, sides of face, and upper throat  
 yellowish-buff ..... *Q. quelea russi*, p. 124.

*Quelea quelea* ♂.*Sanguinirostris lathamii*65. *Quelea quelea*. Red-billed Weaver.*Emberiza quelea*, *Linn. Syst. Nat.* i, p. 310 (1766).*Loxia lathamii*, *Smith, Rep. Exp. Cent. Afr.* App. p. 51 (1836).*Quelea sanguinirostris*, *Bp. Consp.* i, p. 445 (1850); *Gurney in Andersson's B. Damara Land*, p. 173 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 116 (1882).*Ploceus lathamii*, *Layard, B. S. Afr.* p. 186 (1867).*Quelea quelea*, *Sharpe, ed. Layard's B. S. Afr.* p. 458 (1884); *id. Cat. B. M.* xiii, p. 257 (1890); *Shelley, Ibis*, 1886, p. 357; *id. B. Afr.* i, p. 25 (1896); *Butler, Foreign Finches*, p. 312, pl. (1894).

*Description. Adult male in breeding plumage.*—Above, mantle and back brown, the centres of feathers darker; lower back and rump lighter; wings brown, the primaries edged with yellow, the remaining quills with whitish-brown; tail-feathers brown edged with whitish-brown; forehead, lores, sides of face, and upper throat black; crown, nape, sides of neck, and remaining under surface bright rose-pink; the centre of breast and abdomen white; edge of wing yellowish; axillaries and under wing-coverts white; under surface of quills light brown, their inner edges paler.

Iris brown; bill bright red; feet pinkish.

Length 4.75; wing 2.75; tail 1.75; tarsus 0.75; culmen 0.55.

*Young males* when breeding have sometimes no trace of pink on the crown and lower surface of body, these parts being of a uniform straw-colour.

*Adult male in winter.*—Resembles the female, but the crown and under surface of body are ash-brown (the crown in the female being



brown, the under surface buff-white). The male is also slightly larger.

*Adult female*.—Above, brown, the feathers with dark brown centres; wing and tail-feathers brown edged with yellow; crown and back of neck brown; eyebrow cream-white; eyelid and feathers below eye the same; lores and ear-coverts grey; cheeks and under surface of body buff-white, the sides grey; the flanks brown; centre of breast and abdomen white; thighs white; under wing-coverts yellowish-white.

Length 4.60; wing 2.60; tail 1.70; tarsus 0.65; culmen 0.50.

*Distribution*.—The greater part of Africa to the north of the Orange and Vaal Rivers; ranging into Nyasaland and through Damara Land and Angola to the west coast.

*Habits*.—But little has been recorded regarding the habits of this Weaver in a wild state. Ayres remarks that it is "tolerably common in Potchefstroom and the neighbourhood in summer, associating freely with the flights of *Pyromelana oryx* which swarms here. It feeds with them on the open grassy plains and cornfields, principally on small grass-seeds which they pick from the ground." In Damara Land, Andersson met with this species in immense flocks after the breeding season. He also found it a common bird in the Lake Regions. Dr. Butler, in his interesting "Foreign Finches in Captivity," remarks: "In captivity this bird is an indefatigable nest-builder, continuing to form one spherical nest after another as long as material is freely supplied; but, if this is withdrawn, it will set to work with equal zeal to pick the nests to pieces again. When building it always commences in the same way, forming either an oblique or perpendicular hoop of plaited hay or fibre, between two or more branches, or in the fork of a branch; from this hoop it works, starting from the bottom and gradually filling in the back, finishing off with the front, in the centre of which it leaves a small hold to enter by. I have never known any lining to be added. Even when made of fine hay this nest is so strongly woven that it is difficult to tear it apart, yet I have seen one of my Baya Weavers gradually pick one to pieces in little over a day, without spending more than half his time over the piece of mischief.

"If disturbed when building, the Red-beaked Weaver raises both wings perpendicularly and moves them gently up and down, much after the manner of a large butterfly when perched on a flower; and, if the intruder persists in its interference, the architect

turns upon it, fiercely chattering, and does its utmost to drive it away; if successful, it returns quietly to work; still, however, warning off all visitors with its wings." According to Dr. Russ, in confinement the male of this species is the principal nest-builder, the hen only joining in the work when the nest is nearly completed. The nest is finished in seven or eight days, and from three to seven eggs are laid. Incubation lasts fourteen days. When pursuing the hen the cock cries "shack, schak, schak;" when alarmed it utters a sparrow-like monosyllabic note; the ordinary call-note being a softer "tek."

#### 66. *Quelea quelea russi*. Russ' Weaver.

*Ploceus russi*, *Finsch. Gefied. Welt*, 1877, p. 317.

*Quelea russi*, *Sharpe, Cat. B. M.* xiii, p. 260, pl. x, fig. 6 (1890);  
*Butler, Foreign Finches*, p. 316, pl. (1894); *Shelley, B. Afr.* i, p. 26 (1896).

*Description.* *Adult male*.—Similar to the adult male of *Quelea quelea*, but the black mask of the latter is, in *Quelea quelea russi*, yellowish-buff.

Length 4.75; wing 2.70; tail 1.80; tarsus 0.75; culmen 0.55.

*Note*.—Adult males of *Quelea quelea*, with black masks, after being kept in confinement for some years, from age, ill-health, or improper feeding, occasionally lose their black face markings and fade into the plumage of *O. quelea russi*, which they retain.

*Distribution*.—Natal (Pinetown); Eastern Transvaal, common; Bogos Land, July (Jesse).

*Habits*.—Dr. Butler writes regarding Russ' Weaver: "In habits it exactly corresponds with the commoner species, building precisely in the same way and defending its nest just as *Q. quelea* does. I have found it equally hardy and enduring. I purchased a male of this species from Mr. Abrahams' some five or six years ago, and turned it into my Weaver aviary; it moults regularly and consorts with the Red-beaked species, chasing the hens and quarrelling with the cocks in the noisy but harmless fashion of *Q. quelea*. I have not the slightest doubt that, under suitable conditions, the two species would freely interbreed, and it is not improbable that the mules would prove fertile."

796 *Quelea cardinalis* Cardinal *Quelea*  
 795 ~ *erythropeus* Red leaved ~

Genus II. **PYROMELANA.**

**Pyromelana**, Bp. *Saggio Distr. Met. Anim. Vertebr.* p. 141 *Type.*  
 (1831) ..... *P. oryx*.

Bill short, thick at the base, pointed; the culmen smooth, rounded, prolonged backwards to a point on the forehead, the lateral margins slightly sinuated, angulated at the base; gonys long and ascending. Nostrils basal, rounded, partly hidden by frontal plumes. Wings moderate, the first quill short, the third, fourth and fifth longest. Tail square, shorter than the wing; tarsi as long as the middle toe; the inner toe shorter than the outer; claws long, slender and slightly curved. Plumage: sexes in winter alike



*Pyromelana capensis minor.*

of some shades of unobtrusive brown; in summer the males with a gorgeous breeding dress of velvety black and yellow or red, with erectile neck-frills and elongated erectile rump-feathers.

The genus includes about sixteen species and sub-species of African Weaver Birds, commonly called "Bishop Birds" from the gaudy plumage of the males. Three species and two sub-species occur in South Africa.

The Bishop Birds are usually found in the neighbourhood of marshes. They build covered nests in reeds and bushes and lay from three to five eggs. Those of *P. oryx* are plain blue, of the other species spotted or streaked. All the *Pyromelanæ* feed largely on seeds, but occasionally on insects.

*Key to the Species.*

- a. Prevailing colours of the male in summer  
     black and orange-scarlet ..... *P. oryx*, p. 126.
- b. Prevailing colours of males in summer  
     black and yellow.
- a<sup>1</sup>. Size small: wing less than 2·50..... *P. taha*, p. 128.
- b<sup>1</sup>. Size larger: wing exceeding 3·00.
- a<sup>2</sup>. Thighs brown.
- a<sup>3</sup>. Larger, wing 3·35 ..... *P. capensis*, p. 130.
- b<sup>3</sup>. Smaller, wing 3·00 ..... *P. c. minor*, p. 132.
- b<sup>2</sup>. Thighs black ..... *P. c. xanthomelæna*, p. 133.



*orix*      *Cape*

791 **67. *Pyromelana oryx*.** *Red Bishop Bird.*

*Emberiza orix*, Linn. *Syst. Nat.* i, p. 309 (1766).

*Euplectes oryx*, Swains. *B. W. Afr.* i, 187 (1837); Bocage, *Orn. Angola*, p. 335 (1881); Butler, *Feilden and Reid*, *Zool.* 1882, p. 297.

*Ploceus oryx*, Gray, *Gen. B.* ii, p. 352 (1849); Layard, *B. S. Afr.* p. 185 (1867).

*Euplectes sundevalli*, Bp. *Consp.* i, p. 446 (1850); Kirk, *Ibis*, 1864, p. 322; Gurney, *Ibis*, 1865, p. 269; 1868, p. 465.

*Pyromelana oryx*, Finsch and Hartl. *Vög. Ostäfr.* p. 410 (1870); Gurney in Andersson's *B. Damara Land*, p. 172 (1872); Sharpe, ed. *Layard's B. S. Afr.* pp. 462, 849 (1884); id. *Cat. B. M.* xiii, p. 231 (1890); Shelley, *Ibis*, 1886, p. 382; Butler, *Foreign Finches*, p. 302, pl. (1894).

*Pyromelana orix*, Shelley, *B. Afr.* i, p. 25 (1896).

"Grenadier" Weaver or Bishop Bird; "Red Kaffir Fink."

*Description. Adult male in breeding plumage.*—Above, the mantle orange tinged with scarlet; forehead and front of crown, sides of face, ear-coverts and upper throat velvety black; hind crown and neck all round brilliant orange or scarlet-vermilion, dependent upon age; these feathers can be puffed out into a ruff or frill; lower back, rump and upper tail-coverts orange or scarlet-vermilion; wing coverts brilliant orange-red; quills brown with blackish centres; tail-feathers dark brown with paler margins; chest and abdomen velvety black; thighs buff-brown; vent and under tail-coverts scarlet; axillaries and under wing-coverts pale buff, the axillaries tinged with scarlet; under surface of quills pale brown, with paler inner margins.

Iris dark brown; bill black; feet brown.

Length (of male from Tulbagh) 6·00; wing 3·00; tail 2·00; tarsus 0·85; culmen 0·60.

Length (of male from Zululand) 4·75; wing 2·65; tail 1·60; tarsus 0·80; culmen 0·50.

*Adult female.*—Above tawny brown with black shaft streaks, narrower on the crown; wing and tail-quills brown with pale reddish-brown edges; eyebrow yellowish; sides of face, ear-coverts, cheeks and under surface of body dull white, tinged with brown on the sides of face, neck, breast, and flanks, streaked with darker brown on the breast, sides and flanks; thighs and under wing-coverts tawny buff.

Iris dark brown; bill pale brown; feet reddish-brown.

7916. *P. o. Sundevalli* Limpopo Riv. B.S.

792 *P. lardacea* Red crowned do



Length (of female from Tulbagh) 5·30; wing 2·75; tail 1·90; tarsus 0·75; culmen 0·50.

*Adult male in winter.*—Resembles the female, but is slightly larger and darker.

The brilliancy and depth of colour of the plumage of the male in summer increase with age, the chest, neck, and lower back varying from orange to scarlet-vermilion. This species varies greatly in size, specimens from northern localities being very much smaller than those from the neighbourhood of Cape Town and the western part of Cape Colony, but the extremes are connected by a series of intermediate sizes. The small northern race has been named *P. sundevalli* by Bonaparte.

*Distribution.*—South Africa and Benguela; from Cape Town through Cape Colony, Natal, Zululand, and the Orange Free State, ranging through the Transvaal and Portuguese East Africa into Rhodesia, and extending as far north as the Zambesi. On the west coast from Great Namaqua Land, through Damara Land, to the Lake Ngami district and Benguela. Throughout its range a somewhat local bird, nearly confined to marshy districts.

*Habits.*—The Red Kaffir Fink is seldom found at any great distance from marshy ground or the reed-overgrown borders of vleis or rivers. It appears to be a resident in nearly all the localities in which it occurs, although it may occasionally be driven from a district for a time by drought or want of food. In winter the Bishop Birds collect in flocks sometimes numbering thousands of individuals, and frequently feed in the company of other Weaver Birds and Finches on seeds and grain. At night they roost in extensive reed-beds or among bushes. Few birds surpass in beauty the male of this species in summer, when he has fully assumed his gorgeous breeding dress of scarlet and velvety-black. At this season the cocks may be seen slowly gliding over the reed beds with a curious “hovering” flight, during which the body is kept very erect, the plumage of the lower back puffed out, while that of the neck is erected into a frill, looking, in the blazing sunshine, like flames of fire slowly drifting to and fro. At times they dance about in front of the females with puffed out plumes, turning from side to side as if to show off the full beauty of their plumage.

In the neighbourhood of Cape Town this Bishop Bird builds its nest in August or September; in Natal in November or December, and again in March or April. As a rule these birds nest in colonies,

often of great extent, the nests, which are domed and woven out of grass, being attached to the stems of three or four reeds, about four or five feet above the mud or water. The eggs, four or five in number, are somewhat pyriform in shape and of a uniform pale greenish-blue colour. They average  $0.82 \times 0.60$ . The female sits for fourteen days. The young are at first fed on small caterpillars and other insects, including the larvæ of mosquitoes.

Taha

Galden

68. *Pyromelana taha*. Taha Bishop Bird.

Euplectes taha, *Smith, Report, Exp. Cent. Afr.* p. 50 (1836); *id. Ill. Zool. S. Afr., Birds*, pl. 7; *Gurney in Andersson's B. Damara Land*, p. 171 (1872).

Ploceus taha, *Layard, B. S. Afr.* p. 184 (1867).

Pyromelana taha, *Sharpe, ed. Layard's B. S. Afr.* p. 465 (1884); *id. Cat. B. M.* xiii, p. 242 (1890); *Shelley B. Afr.* i, p. 25 (1896).

*Description. Adult male in summer.*—Crown golden yellow; nape, back, rump, and upper and under tail-coverts bright yellow, the upper back streaked with brown; scapulars, wing-coverts and secondaries dark brown edged with yellow; primaries brown edged with white; tail brown; lores, sides of face and neck, a collar round hind-neck and under surface of body jet-black; under wing-coverts buff.

Iris brown; bill black; feet pale brown.

Length 4.25; wing 2.40; tail 1.60; tarsus 0.70; culmen 0.50.

*Adult male in winter.*—Resembles the female.

*Adult female.*—Above brown streaked with black; wings and tail blackish, the feathers edged with brown; eyebrow buff; ear-coverts brown, black above; below sandy brown streaked with black on the breast, sides and flanks; throat and abdomen nearly white; edge of wing yellow; axillaries and under wing-coverts dull white.

Iris light brown; bill pale brown; feet darker brown.

Length 4.10; wing 2.40; tail 1.30; tarsus 0.70; culmen 0.50.

*Distribution.*—From Durban and Pinetown in Natal northward, but somewhat locally distributed. In the Free State it is rather common on the Modder river; in the Transvaal it is found very numerously in marshy districts from Potchefstroom to the Limpopo. It extends into Matabili and Mashona Lands; thence to Lake Ngami and Ondongo. A small race occurs in Masai Land which Dr. Sharpe does not consider specifically distinct.

*Habits.*—In the Transvaal and some parts of the Orange Free State these little Bishop Birds collect in immense flocks towards autumn and remain together until the following spring, when they break up into smaller companies, many of which appear to migrate,



*Pyromelana taha.* Male in summer.

while others remain to breed in small colonies in the swamps or among reeds on the borders of vleis or streams. During autumn and winter these birds feed chiefly on fallen grass-seeds; they are also accused of doing considerable damage to the corn, and especially the millet-crops, but in summer they subsist largely on insects, and



feed their young almost entirely on caterpillars and soft-bodied larvæ. Nothing can exceed the beauty of the males in their newly-acquired spring plumage of brilliant yellow and glossy black, and one never tires of watching these feathered gems as they hover with puffed-out plumage over the reeds or grass in which their mates are hidden, looking, as Ayres aptly remarks, "like balls of black and yellow floating slowly about over the grass."

They breed over the greater portion of the Transvaal in swampy localities, from the Vaal river to the Limpopo, and also, according to Andersson, in great abundance in Ondongo and at Lake Ngami.

The nests are neatly woven out of long pieces of fine grass in the form of deep purses, or half-closed bags, suspended from three or four reeds, usually over water. The eggs are laid about the end of December in the Northern Transvaal, but not until two months later in the north of Damara Land. They are four or five in number, of a glossy white, dotted and sprinkled all over with very small specks of black or dark brown. They measure, on the average,  $0.73 \times 0.52$ .

*Panthomelana*

790<sup>c</sup> 69. **Pyromelana capensis.** *Black and Yellow Bishop Bird.*

*Capensis*  
Loxia capensis, Linn. Syst. Nat. i, p. 306 (1766).

Ploceus capensis, Gray, Gen. B. i, p. 352 (1850); Layard, B. S. Afr. p. 184 (1867).

Pyromelana capensis, Sharpe, ed. Layard's B. S. Afr. pp. 463, 849, pt. (1884); id. Cat. B. M. xiii, p. 236 (1890); Butler, Foreign Finches, p. 295, pl. ♂ and ♀ (1894); Shelley, B. Afr. i, p. 24 (1896).

"Yellow Kaffir Fink."

*Description.* *Adult male in breeding plumage.*—Lower back and rump bright golden-yellow, the feathers elongated and fluffy; least and middle wing-coverts, edge of wing and axillaries golden-yellow; under wing-coverts buff; scapulars brown, tinged with yellow and streaked with blackish; rest of wing brown, the quills edged with pale brown and yellow; thighs brown; entire head, neck and under surface of body velvety black, highly glossed; rest of plumage, including the tail, black.

Iris dark brown; bill black; feet pale brown.

Length 7.00; wing 3.35; tail 2.80; tarsus 1.00; culmen 0.70.

*Adult female.*—Above brown, the feathers streaked with broad blackish centres, those of the back with whitish margins; lower back and rump olive-yellow streak with brown; upper tail-coverts

790<sup>c</sup> X-C - Knysnae Knysna Yellow B.  
790<sup>d</sup> X-C - approximans Brakbos



pale brown streaked with dusky ; lesser and middle wing-coverts dark brown edged with olive-yellow ; rest of wing and tail-feathers dark brown edged with yellowish-brown ; lores and slight eyebrow olive-yellow ; plumes round the eye whitish ; ear-coverts and sides of face dark brown ; cheeks and under surface of body whitish, the sides of body and flanks tinged with brown and streaked with dark brown ; under wing-coverts yellowish ; under surface of quills dusky with buff inner margins.

Iris dark brown ; bill whitish ; feet pale brown.

Length 6.00 ; wing 3.30 ; tail 2.25 ; tarsus 0.95 ; culmen 0.65.

*Adult male in winter.*—Resembles the adult female in plumage, but is distinguished by his larger size. The bill at this season is pale brown.

The change of plumage from the winter to the summer dress in the male is very gradual, lasting, near Cape Town, from about the middle of July to the middle of September. Only the feathers of the lower back, rump and flanks are entirely changed by a moult, the remaining plumage and bill becoming darker, owing to a gradual absorption of colouring matter, the change first appearing at the point of the lower mandible. In autumn the colour is gradually reabsorbed if the feathers are not previously moulted. According to Dr. Butler (*Ibis*, 1897, p. 359), other species of the genus *Pyromelana* change from their winter to spring dress in much the same manner.

*Distribution.*—Western Cape Colony, from Cape Town to the George District on the east, northward to Clan William. Common on the Cape Peninsula.

*Habits.*—This large Bishop Bird is nearly everywhere common in the Western Colony, and although it seems to prefer the vicinity of marshy vleis or streams it may be frequently found in very dry and arid tracts of country. The male in spring and summer is fond of uttering his harsh notes from the top of a tall bush or reed, and is then very conspicuous in his contrasting glossy black and yellow plumage. The female at this season is not often seen, keeping much to thick reed-beds or bushes, even when not sitting on her eggs. In autumn the old birds of both sexes, together with their young, form considerable flocks, which do not separate until the following spring. The long, loose, yellow feathers on the lower back and rump of the breeding male are erectile, and when the bird is approaching a hen, or is excited, they stand out at right angles to the body, giving him an extraordinary appearance, appa-

rently irresistible to the impressionable female. The song consists of a series of harsh and discordant notes. Although these birds feed largely on grass-seeds or grain, and are accused by farmers of working havoc with the crops, they devour a considerable number of insects, and feed their young on small caterpillars and grubs. Individuals that I have kept in confinement readily devoured nearly all the insects presented to them, showing a preference for meal-worms or caterpillars. This species nests in September or October. The nest, a domed structure with a side entrance, is woven out of fine grass, and is usually attached by its sides to three or four reed-stems; sometimes it is built in thick bushes at a height of four or five feet. The eggs, almost always four in number, have a pale greenish-blue ground colour nearly concealed by spots, blotches, and lines of dark brown or slate-colour. They average  $0.85 \times 0.60$ , and are hatched in about fourteen days.

#### 70. *Pyromelana capensis minor*.

*Smaller Black and Yellow Bishop Bird.*

*Oryx minor*, *Reichenb. Singv.* p. 59, pl. 24, figs. 210, 211 (1861).

*Euplectes capensis* (*nec Linn.*), *Gurney, Ibis*, 1865, p. 269; *id. in Andersson's B. Damara Land*, p. 170 (1872).

*Pyromelana capensis* (*nec Linn.*), *Sharpe, ed. Layard's B. S. Afr.* pp. 463, 849, pt. (1884).

*Pyromelana capensis*, *subsp. a. minor*, *Sharpe, Cat. B. M.* xiii, p. 238 (1890).

*Pyromelana minor*, *Shelley, B. Afr.* i, p. 25 (1896).

*Description.* *Adult male*.—Like the male of *P. capensis*, but much smaller; the thighs brown as in *P. capensis*.

Length (♂ *Peddie*) 5.40; wing 3.00; tail 2.00; tarsus 0.80; culmen 0.50.

*Adult female*.—Resembles the female of *P. capensis*, but is smaller.

*Distribution*.—From Knysna, in Cape Colony, through the Eastern Cape Colony and Natal into Zululand, the Orange Free State, and the Transvaal, ranging north of the Limpopo River into South Matabililand.

*Habits*.—Like those of *Pyromelana capensis*.

790 *Canthomelana* - c - minor - rhynch

Great yellow Bishopbird

789 *Canthomelana* - c - minor - rhynch

East Afr Yellow Bishopbird

788 *Canthomelana* - c - minor - rhynch

71. *Pyromelana capensis xanthomelæna*.*Black-thighed Bishop Bird.**Euplectes xanthomelas*, Rüpp. *Neue Werb.*, Vög. p. 94 (1835); *Kirk, Ibis*, 1864, p. 322.*Coliuspasser xanthomelas*, *Shelley, Ibis*, 1886, p. 350; 1888, p. 293.*Pyromelana xanthomelæna*, *Sharpe, Cat. B. M.* xiii, p. 239 (1890); *Marshall, Ibis*, 1896, p. 246; *Shelley, B. Afr.* i. p. 24 (1896).*Description*.—Similar to *Pyromelana capensis*, but distinguished by its entirely black thighs (Sharpe).

Iris dusky; upper mandible black, lower yellowish; feet reddish.

Length 6·00; wing 3·15; tail 2·30; tarsus 0·85; culmen 0·65.

The birds from the Shiré Valley, though referable to *P. xanthomelæna*, are much smaller (wing, 2·65—2·7) than individuals from more northern localities (Sharpe).*Distribution*.—From Salisbury in Mashonaland to Abyssinia, westward to Angola. Salisbury, Mashonaland, Dec. (Marshall).

## Genus III. UROBRACHYA.

*Type.**Urobrachya*, Bonaparte, *Conspectus*, i, p. 447 (1850) ... *U. axillaris*.

Bill moderate, robust, conical, the culmen slightly arched, prolonged backwards to a point among the frontal feathers; nostrils basal, lateral, hidden by plumes and rounded. Wings moderately long, the first quill very short. Tail shorter than the wing, much rounded and graduated, the feathers with rounded ends. Tarsi and toes moderately strong. Plumage: the males with a very distinct breeding plumage, the body of some shade of black, the lesser wing-coverts of orange or scarlet, the feathers of a soft and velvety texture; in the non-breeding season the males resemble the females in colour—some shades of unobtrusive brown. The *Urobrachyæ*, like the *Viduæ* and *Coliopasseræ*, are polygamous, each male mating with from ten to fifteen females.

Five species of this genus are found in Africa; one ranges on the east coast from Zanzibar to East London, another inhabits Benguela and extends southward into Ovampo Land.

*Key to the Species.*

- a.* Lesser wing-coverts orange-scarlet ..... *U. axillaris*, p. 134.  
*b.* Lesser wing-coverts orange-yellow ..... *U. bocagii*, p. 136.



72. **Urobrachya axillaris.** *Red-shouldered Widow Bird.*

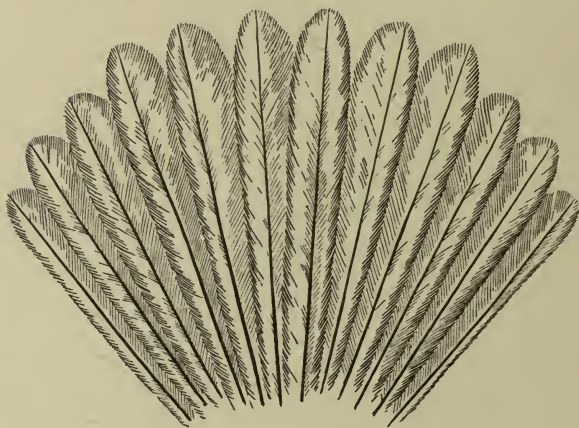
*Vidua axillaris*, *Smith, Ill. Zool. S. Afr., Birds*, pl. 17 (1838); *Layard, B. S. Afr.* p. 189 (1867).

*Penthetria axillaris*, *Sharpe, ed. Layard's B. S. Afr.* pp. 461, 849 (1884).

*Urobrachya axillaris*, *Sharpe, Cat. B. M.* xiii, p. 224 (1890); *Shelley, B. Afr.* i, p. 24 (1896).

*Coliuspasser axillaris*, *Shelley, Ibis*, 1886, p. 349.

"Flop" of Natal Colonists; "Entaka" Zulu.



*Urobrachya axillaris* ♂.

*Description.* *Adult male in breeding plumage.*—General colour all over, deep velvety black; the least wing-coverts orange-scarlet; the median coverts cinnamon-red; edge of wing, axillaries, and under wing-coverts cinnamon colour.

Iris dark brown; bill pale blue; feet brown.

Length 6·30; wing 3·50; tail 3·00; tarsus 1·00; culmen 0·65.

*Adult female.*—Above sandy buff streaked with black; lesser wing-coverts orange streaked with black; remaining wing-coverts,



quills and tail-feathers, blackish-brown edged with pale brown; eyebrows, sides of face and ear-coverts pale brown; cheeks and under surface of body pale sandy buff, darker on the flanks, which are slightly streaked; axillaries and under wing-coverts cinnamon-colour.

Length 5.20; wing 3.00; tail 1.75; tarsus 0.95; culmen 0.65.

*Male in winter* and the young resemble the female in plumage.

*Distribution*.—From Eastern Cape Colony through Natal and Zululand into the Eastern Transvaal, the Portuguese Territory, Mosambique and Nyasaland; extending as far north as Mombas on the east coast.

*Habits*.—In the lower parts of Natal these Widow Birds are common on the grass veldts, especially those that border on reedy vleis or marshy ground, where the grass grows luxuriantly. Like all the members of this genus they are polygamous in their habits, and in spring the handsome males, looking very brilliant and spruce in their recently acquired plumage of velvety-black, with scarlet and orange epaulettes, may be seen flitting over the reeds or grass with a curious "flopping" flight, each one attended and closely followed in all his movements by ten or twelve females, insignificant-looking little brown birds, which nearly always keep close together in a "bunch" a few yards behind their lord and master. About the beginning of November the females separate and commence building their nests. These are never very close together, although they are all within a certain district that the male seems to look upon as his own exclusive property, and from which he drives other males of his kind, as well as those of the much larger and stronger *Coliopasser procne* who, hampered by their long tails, stand no chance in a fight with their smaller but much more active antagonist. Each female builds and occupies a separate nest. During the time she is sitting the male stations himself on a tall weed somewhere near the centre of his harem, and keeps a sharp look-out for intruders; occasionally flying round to see how matters are progressing at his various establishments. Should a man or other dangerous enemy approach, he flies to each nest in succession with a warning note; upon which the sitting females leave their nests, creep under the grass for some yards, then rise on the wing to follow him to a distance. The nest, usually built in the centre of a tuft of grass, from eight inches to a foot off the ground, is a beautifully light and airy structure, oval in shape and domed, with a side entrance near

the top; it measures about four inches and a-half in height, and three inches in diameter, is constructed of fine grass, with the flowering tops attached, woven in a sort of open network, so that the sides can be seen through, without any additional lining. The sides of the nest are attached to many of the surrounding grass-stalks, the blades and tops of the latter being bent over in the form of a canopy so as to completely conceal it from above. The eggs, laid towards the end of December, are three in number. They have a highly-polished surface of a clear sea-green, marked with large spots and blotches of deep olive-brown. They measure  $0.80 \times 0.58$ .

These Widow Birds feed largely on insects, including grasshoppers, locusts, mantides, and termites, also upon various seeds, especially small grass-seeds. In winter the old and young birds form good-sized flocks, but never seem to wander far from their breeding station.

787 73. *Urobrachya bocagii*. <sup>Yellow Sh.</sup> *Bocage's Widow Bird.*

*Urobrachya bocagii*, Sharpe, *Cat. Afr. B.* p. 63 (1871); *id. Cat. B. M.* xiii, p. 226, pl. 9 (1890); *Shelley, B. Afr. i*, p. 24 (1896).

*Penthetria bocagii*, Bocage, *Orn. Angola*, p. 343 (1881); *Sharpe, ed. Layard's B. S. Afr.* p. 461 (1884).

*Coliuspasser bocagii*, *Shelley, Ibis*, 1886, p. 349.

*Description.* *Adult male.*—Like *U. axillaris*, but with the lesser wing-coverts of a bright orange colour, the primary coverts cinnamon-brown.

Iris brown; bill dull white; feet dark brown.

Length 7.10; wing 3.50; tail 2.75; tarsus 1.00; culmen 0.65.

*Distribution.*—Northern Ovampo Land and the valley of the Cunéné River, extending northward into Benguela and Angola.

*Habits.*—Like those of *Urobrachya axillaris*.

Genus IV. **COLIOPASSER.**

*Type.*

**Coliuspasser**, Rüpp. *N. Wirb. Vög.* p. 98 (1835-40) ...*C. laticauda*.

Bill somewhat lengthened, strong, cone-shaped; laterally compressed; the culmen arched and prolonged to a point on the forehead; the gonys lengthened and ascending. Nostrils basal, lateral,

rounded and hidden by the frontal feathers. Wings rather long, the first quill minute, the second, third and fourth nearly equal, the fifth the longest, the sixth slightly shorter. Tail: in the males, all the tail-feathers and coverts are greatly lengthened in summer and considerably exceed the wing in length; in the males in their winter plumage, which resembles that of the females and young, the tail is shorter than the wing. Tarsi moderately strong and strongly scaled anteriorly. Toes rather long and slender, the hind toe about as long as the inner. Claws long and sharp.



*Coliopasser ardens.*

Plumage: the males with a highly decorative breeding plumage, conspicuously different from their winter garb, which is, like that of the females, of unobtrusive shades of brown. Species of *Coliopasser* differ from those of *Urobrachya* in that the tail-feathers of the males are greatly lengthened in summer; from those of *Vidua* in having all, and not the four central feathers only, prolonged. In general habits, in their nesting and in their food, the species of these three genera are much alike. The male of *Coliopasser albonotatus* has, like *Urobrachya axillaris*, and the Bishop Birds, *Pyromelanæ*, the power of erecting the neck feathers of the summer dress into a ruff or frill. Eleven species are included in this genus by Captain Shelley: they are confined to the Ethiopian Region; three species are South African.

*Key to the Species.*

a. Tail longer than the wing.

a<sup>1</sup>. Tail between two and three times the length of wing.

a<sup>2</sup>. Larger: wing exceeding 5·25; tail-feathers tapering towards ends; lesser wing-coverts orange-scarlet .....

*C. procne*, ♂  
in summer, p. 139

b<sup>2</sup>. Smaller: wing under 3·00; tail-feathers with rounded ends, and not tapering; lesser wing-coverts black like rest of wing

*C. ardens*, ♂  
in summer, p. 142



- b<sup>1</sup>. Tail not twice the length of wing.  
 c<sup>2</sup>. Lesser wing-coverts bright yellow ..... *C. albonotatus*, ♂  
 in summer, p. 138
- b. Tail shorter than the wing.  
 c<sup>1</sup>. Larger : wing exceeding 4·00. Lesser wing-coverts brown, edged with orange-red.  
 d<sup>2</sup>. Wing about 4·50 ..... *C. procne*, ♀ p. 139  
 e<sup>2</sup>. Wing about 5·40 ..... *C. procne*, ♂  
 in winter, p. 139
- d<sup>1</sup>. Smaller : wing less than 3·00. Lesser wing-coverts dark brown edged with buff.  
 f<sup>2</sup> Wing about 2·50 ; tail dark brown ..... *C. ardens*, ♀ p. 142  
 g<sup>2</sup>. Wing about 2·90 ; tail black ..... *C. ardens*, ♂  
 in winter, p. 142

*Penthetropsis*

74. **Coliopasser albonotatus.** *White-winged Widow Bird.*

*Vidua albonotata*, Cass. *Proc. Philad. Acad.* 1848, p. 65 ; *id. Journ. Philad. Acad.* i, p. 241, pl. 30, fig. 1 (1849) ; *Layard, B. S. Afr.* p. 189.

*Penthetria albonotata*, *Bocage, Orn. Angola*, p. 342 (1881) ; *Holub and Pelzeln, Orn. Südaf.* p. 124 (1882) ; *Sharpe, ed. Layard's B. S. Afr.* p. 460 (1884) : *id. Cat. B. M.* xiii, p. 219 (1890).

*Coliuspasser albonotatus*, *Shelley, Ibis*, 1886, p. 348.

*Coliopasser abonotatus*, *Shelley, B. Afr.* i, p. 24 (1896).

*Description.* *Adult male in breeding plumage.*—Entire head, body and tail jet black ; lesser wing-coverts bright yellow ; middle and greater coverts black edged with brownish-white, the outermost of the greater coverts and the primary-coverts pure white ; quills black narrowly edged with brown, all excepting the innermost secondaries white at the base ; axillaries and under wing-coverts white ; edge of wing yellow ; the axillaries tinged with yellow.

Iris hazel ; bill pale blue ; feet black.

Length 6·60 ; wing 3·00 ; tail 3·50 ; tarsus 0·80 ; culmen 0·50.

*Distribution.*—On the east coast from Natal to Nyasaland ; on the west coast from the Cunéné River to Gaboon, extending along the valley of the Zambesi into Northern Bechuana and Matabili Lands. In Natal it is rare, but becomes more common in Zululand and the Eastern Transvaal. Dr. Kirk obtained specimens on the Zambesi and Shiré Rivers ; Dr. Holub at Panda-ma-Tenka ; and Mr. A. Whyte at Mpimbi, in Nyasaland. I have myself only

785 *P. meacrowa* yellow but underparts



met with this species in the Eastern Transvaal. It is not recorded from any part of Cape Colony, Great Namaqua or Damara Land.

*Habits.*—This very beautiful and rare Widow Bird appears to have much the habits of *Urobrachya axillaris*. It frequents marshy ground on the borders of vleis, where, in summer, the male sits on the summit of a tall stem of grass or reed and shows off his glossy black plumage and yellow shoulder-knot, frequently puffing out the neck feathers into a sort of ruff, like a Bishop Bird, while opening and shutting his wings or occasionally taking a short flight and hovering, like a *Vidua*, with up-raised wings, over the grass, where doubtless one of his brown wives is concealed. I have never had an opportunity of handling a female of this species, but I have seen the male followed in his flight by ten or a dozen hens, who appeared to be of a very uniform brown colour, and very much smaller than the cock, as is the case with *Urobrachya axillaris*. The male described had been feeding on grass-seeds and small beetles. Although this species has a wide range in Africa, it appears to be nowhere common.

788 *Diatriopenera long*  
75. **Coliopasser procne.** *Great-tailed Widow Bird.*

*Emberiza procne*, *Bodd. Tabl. pl. Enl.* p. 39 (1783).

*Chera procne*, *Gray. Gen. B.* ii, 1849, p. 355; *Sharpe, Cat. B. M.* xiii, p. 213 (1890).

*Chera progne*, *Layard, B. S. Afr.* p. 190; *Sharpe, ed. Layard's B. S. Afr.* pp. 458, 849 (1884).

*Coliopasser procne*, *Shelley, B. Afr.* i, p. 23 (1896).

"Isa-Kabuli" of the Zulus; "Kaffir-Finke" of Colonists.

*Description.* *Adult male in breeding plumage*—Entire head, body and tail glossy black; lesser wing-coverts orange-scarlet; median-coverts varying from white to buff; remaining coverts and quills black edged with whitish and sandy brown, the outer webs of the primaries white towards their ends; axillaries, under wing-coverts and under surface of quills black.

Iris brown; bill light bluish-ash; feet dusky-brown.

Length 23·00; wing 5·00; tail 19·50; tarsus 1·15; culmen 0·70.

The lesser wing-coverts vary from orange to scarlet.

In winter the male resembles the female.

*Adult female.*—General colour sandy buff streaked with black; lesser wing-coverts orange-yellow streaked with dark brown; remaining coverts and secondaries dark brown margined with sandy-

buff; the primaries lighter brown with narrow lighter margins; tail-feathers brown edged with sandy-buff; crown rufous-brown streaked with black; eyebrow buff; under surface of body dull white; the breast, sides and flanks streaked with brown; axillaries and under wing-coverts black.



*Coliopasser procne*. Male in breeding dress. From Distant's "Naturalist in the Transvaal" (by permission of the publishers).

Length 7·00; wing 4·40; tail 3·40; tarsus 1·20; culmen 0·70.

*Young male*.—Differs from the female in being more streaked on the chest.

*Distribution*.—Eastern Cape Colony, Natal, Zululand, the

Orange Free State, the Transvaal, Portuguese East Africa and Benguela. Dr. Sharpe also records it as having been met with as far north as the river Bogonota, in Masailand, an adult male having been shot there by Mr. F. J. Jackson on July 20, 1890; and "a few seen in a swamp amongst the grass two camps after Doreta on our downward march" (*Ibis*, 1891, p. 244).

*Habits*.—This beautiful Widow Bird, remarkable for the extraordinary size of the tail of the male during the breeding season, is, in many parts of Upper Natal, Zululand and the Southern Transvaal, a very common summer resident on the borders of vleis and swamps as well as on the open veldt, wherever there is a sufficient growth of grass to afford it concealment and a shelter for its nest. On bright sunny days the long-tailed males are fond of sitting on the taller heads of grass, or on some prominent bush or weed. They frequently fly from bush to bush with gracefully arched tail, apparently not much incommoded by its great size; but in the early morning when the grass is still wet with dew, or after a shower of rain, not a bird will be visible; they are then hiding under the grass, so hampered by their wet and heavy tails as to be unable to rise. At such times numbers are caught by the Zulu boys, who prize the long tail-feathers as head-dresses. In autumn both old and young collect in flocks of thousands and frequently leave the neighbourhood of their breeding place. At this season, until the following spring, they roost in dense reed-beds or among thick bushes. During autumn and winter they feed largely upon grass-seeds, millet and grain, in summer to a considerable extent on various insects. The young are fed on small caterpillars, grubs and termites. As soon as the males begin to assume their long tails in spring the flocks break up, and each male, accompanied by from ten to fifteen females, repairs to some suitable breeding place. As soon as they have fixed on a locality the females separate and each one proceeds to construct a nest in a thick tuft of grass. The cock meanwhile keeps a look-out from some point of vantage and spends most of his time in driving off other cocks who attempt to trespass on the territory occupied by his harem. He takes no part in the construction of any of the nests. Should he see a man or beast of prey approaching he flies round with a warning cry, upon which the hens leave their nests, creep under the grass for a short distance, then rise and fly off until danger is past. The nest is an oval domed structure, with a side entrance, roughly woven out of fine grass lined with the flowering tops of grass or reeds. It is generally



placed a few inches off the ground, in the centre of a tuft of grass, attached by its sides to many grass stalks, the blades and tops of which are bent down and tied together to form an additional concealment and protection. The female sits for fourteen days. The eggs, usually four in number, are small considering the size of the bird. They are white or bluish-white closely marked with small spots and dashes of dark brown and slate-grey. They average 0.90 by 0.67.

783 76. *Coliopasser ardens*. *Red-collared Widow Bird*.

*Emberiza ardens*, *Bodd. Tabl. Pl. Enl.* p. 39 (1783).

*Vidua ardens*, *Gray, Gen. B.* ii, p. 355 (1849); *Layard, B. S. Afr.* p. 190 (1867); *Sharpe, ed. Layard's B. S. Afr.* pp. 455, 849 (1884).

*Penthetria ardens*, *Cab. Mus. Hein.* i, p. 177 (1850); *Finsch and Hartl. Vög. Ostaf.* p. 423 (1870); *Sharpe, Cat. B. M.* xiii, p. 215 (1890); *Butler, Foreign Finches*, p. 290, pl. ♂ and ♀ (1894).

*Coliopasser ardens*, *Shelley, B. Afr.* i, p. 23 (1896).

*Description.* *Adult male in breeding plumage.*—Entire head and body jet black, with a crescent-shaped half collar, varying from orange to scarlet, separating the throat from the breast; this collar is sometimes absent. The feathers of thighs and under tail-coverts edged with grey; tail black; wings black, most of the feathers edged with grey.

Iris bright brown; bill black; legs and feet dark grey-brown.

Length 12.50; wing 3.00; tail 9.50; tarsus 0.80; culmen 0.60.

*Adult female.*—Above brown, the feathers with black centres; wing and tail-feathers dark brown edged with buff; crown like the back; eyebrow, lores and feathers below eye yellowish-white; ear-coverts buff-brown; under surface of body buff-yellow, the under tail-coverts streaked with brown: axillaries and under wing-coverts greyish-white.

Iris brown; bill, legs and feet pale brown.

Length 4.75; wing 2.50; tail 1.60; tarsus 0.80; culmen 0.55.

*Adult male in winter.*—Resembles the female; but the wing-feathers are black edged with buff; the tail black; the chest tinged with red; he is also larger.

*Young.*—On leaving the nest resemble the female, males being slightly larger, with darker wings and tail.

*Distribution.*—From the neighbourhood of Port Elizabeth, in Eastern Cape Colony, through Natal, Zululand, the Transvaal, and



Portuguese East Africa, extending as far north as 5° N. lat. On the west coast it has been recorded from Angola, Sierra Leone and Senegambia. In Eastern Cape Colony and Natal it is very generally distributed in marshy localities, as at Alice (Layard); East London (Rickard); King William's Town (Trevelyan); Eland's Post (Atmore); Pinetown, Natal (Shelley); Newcastle (Butler, Reid and Feilden); Drakensberg (Buckley). It is somewhat local but fairly common in the Transvaal and Matabili Land; but it has not been recorded from Great Namaqua or Damara Lands.

*Habits.*—In winter these Widow Birds gather in considerable flocks, in which they frequently mix with other of the Weaver-finches, and in which the females invariably outnumber the males in the proportion of from ten to fifty to one. They frequent grassy plains, or old fields of Kaffir-corn, spots in which they find abundance of small seeds on the ground. At night they retire to roost in reeds, or, if these be wanting, in the long grass. As soon as the males, in spring, commence to assume their long tails and breeding plumage, the flocks break up, and each male, accompanied by from eight to fifteen females, betakes himself to some neighbouring reed-bed, or marshy spot overgrown with long grass. Here he takes up his station on one of the tallest weeds, shows off his tail, which is blown about by the slightest breeze, makes an occasional sally to drive off another male, or hovers, with jerky, erratic flight, over the rushes or grass in which the females are presumably hiding or building their nests; for they, unlike the male, are not much in evidence at this season, but keep well out of sight. The nests are domed, with a small entrance at the side, carefully woven of fine grass in the centre of a thick tuft of grass, many of the growing grass stems being built into the walls of the nest, while others are plaited so as to form an arched bower over it. The nest is, in fact, very like that of *Coliopasser axillaris*. I have never been fortunate enough to find the eggs.

#### Genus V. VIDUA.

*Type.*

**Vidua**, Cuvier, *Leçons d'Anat. Comp.* i, Tabl. 2 (1800). V. principalis.

Bill more or less lengthened, cone-shaped, compressed laterally; the culmen much arched or nearly straight from the base to the tip, and advancing on the forehead to a point; the lateral margins sinuated or straight, the gonys lengthened and ascending; the

nostrils basal, lateral, almost hidden by the frontal feathers and rounded. Wings moderate; the first quill spurious, the second nearly as long as the third; the third, fourth and fifth nearly equal and longest. Tail of moderate length, in the male the four centre feathers greatly elongated and of various forms. Tarsi slender, scaled anteriorly; toes long and slender, the lateral ones nearly equal, the hind toe as long as the inner. Claws long and sharp. Plumage: in winter the two sexes hardly distinguishable, in the breeding season conspicuously different, owing to the assumption by the male of a highly decorative dress, including the four elongated central tail-feathers.

The Widow, or Whydah Birds, as they are sometimes termed, comprise five species, confined to the Ethiopian region. They are of small size, and, according to Dr. Butler, in "Foreign Finches in Captivity;" "are readily distinguished from the Ornamental Finches and from the Weavers, inasmuch as all of them, when feeding upon the ground, scratch the earth with their feet with a shuffling motion, somewhat reminding one of a fowl. When courting, they rise and fall in the air above the hen, flapping their wings rythmically and then suddenly swoop down at her with a squeal.

"All the Whydahs have a harsh song, approaching that of the Weavers, but sometimes with a few clear notes interspersed; like the latter birds, they will live entirely upon millet, canary and paddy-rice, caring little for green food. They do not seem to be great insect-eaters, though they will sometimes accept mealworms or green caterpillars."

The Widow-birds are polygamous, each male being generally accompanied by from ten to fifty or more, females. Very little is known of their nesting habits, but the females doubtless build domed nests in the grass like the *Coliopasseres*. The eggs have not been described.

#### *Key to the Species.*

- a. The four central tail-feathers greatly elongated,  
between three and four times the length of the  
wing.
- a<sup>1</sup>. Central feathers narrow and of nearly equal  
width throughout, the webs convex, so that  
the outer pair enclose the inner. Bill red ... *V. principalis*, ♂ in  
summer, p. 145.

- b*<sup>1</sup>. Central feathers webbed only for two or three inches at the ends, the rest bare shaft.  
Bill red ..... *V. regia*, ♂ in summer.  
p. 148.
- c*<sup>1</sup>. Central feathers very broad; the inner pair webbed at base for about four inches, the shafts extending several inches further, and twisted, so that the inner surfaces are opposed; the outer pair about twelve inches long with a hair-like filament attached to the base of each. Bill black..... *V. paradisea*, ♂ in summer, p. 150.
- b*. Tail shorter than the wing.
- d*<sup>1</sup>. Bill red.
- a*<sup>2</sup>. Crown reddish-buff, unstreaked, bordered by a broad black streak.  
Eyebrow reddish-buff.  
Wing 2·65; tail 2·20 ..... *V. principalis*, ♀  
p. 146.  
Wing 2·85; tail 2·25 ..... *V. principalis*, ♂ in winter, p. 146.
- b*<sup>2</sup>. Crown whitish streaked with brown, bordered by a streak of dusky.  
Eyebrow whitish.  
Wing 2·80; tail 2·00 ..... *V. regia*, ♀ p. 148.  
Wing 2·90 ..... *V. regia*, ♂ in winter, p. 149,
- c*<sup>1</sup>. Bill light brown.
- c*<sup>2</sup>. Crown buff slightly streaked with black and bordered by a broad streak of black.  
Eyebrow buff.  
Wing 3·00; tail 2·50..... *V. paradisea*, ♀ p. 150.

77. *Vidua principalis*. *Pin-tailed Widow Bird*.

*Emberiza principalis*, Linn. *Syst. Nat.* i, p. 313 (1766).

*Vidua principalis*, Cuvier, *Règne Anim.* i, p. 389 (1817); Layard, *B. S. Afr.* p. 189 (1867); Gurney in Andersson's *Birds of Damara Land*, p. 181 (1872); Sharpe, ed. Layard's *B. S. Afr.* pp. 453, 848 (1884); *id.* *Cat. B. M.* xiii, p. 203 (1890); Butler, *Foreign Finches*, p. 278, pl. ♂ and ♀ (1894); Shelley, *B. Afr.* i, p. 23 (1896).

"Koning-Roodebec" of Dutch Colonists.

Dominican Widow Bird; Common Widow Bird of English.

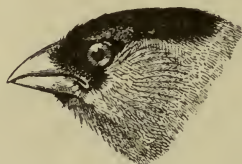
*Description.* Adult male in breeding plumage.—Above, crown and mantle black, a white collar separating the crown from the mantle;



lower back, rump and upper tail-coverts white, the coverts streaked with black; lesser and middle wing-coverts white; rest of wing black, the feathers broadly edged with reddish-buff; tail-feathers black variegated with white, the four centre feathers greatly elongated and pure black; cheeks, ear-coverts, sides of face and neck, as well as entire under surface of body white, a patch of black on each side of the chest; in some specimens the chin is black; under tail and wing-coverts white.

Iris brown; bill red; feet light brown.

Length to end of short tail-feathers 5·15; of long feathers 12·50; wing 2·85; tail, not including long feathers, 2·25; including long feathers, 9·60; tarsus 0·70; culmen 0·40.



*Vidua principalis.*

*Adult female.*—Above reddish-buff streaked with black; crown darker dotted with black and bordered on each side by a black streak; eyebrows and feathers below the eye buffish; behind the eye a black streak; a third black streak includes the upper ear-coverts; rest of ear-coverts, cheeks and under surface of body reddish-buff; the centre of breast and abdomen and under tail and wing-coverts white; lesser and middle wing-coverts black edged with buff; greater coverts black edged with tawny; quills blackish edged with grey; tail-feathers dusky brown with a patch of white towards the end of the inner web of the outer feathers.

Iris brown; bill red; feet light brown.

Length 4·75; wing 2·60; tail 2·20; tarsus 0·60; culmen 0·40.

*Adult male in winter.*—Resembles the female, but the wings are darker the throat whiter; it is also somewhat larger; wing 2·85; tail 2·25.

*Young of the year.*—Above uniform brown, the wing-coverts redder; rest of wing dusky brown, the quills edged with lighter reddish-brown; tail like the wing; crown like the back; face, cheeks and under surface of body buff-white, darker on the sides and flanks; axillaries and under wing-coverts dull white; bill black.



Specimens from South Africa are larger than those from more northern localities.

*Distribution.*—On the west coast from the Orange River to Senegambia; on the east from Knysna in Cape Colony to Abyssinia. It also ranges throughout the Congo Valley region and extends to the White Nile and Central Lake district. It is generally distributed in "grassy" districts in Eastern Cape Colony, Natal, Zululand and the Transvaal, as well as in the Orange Free State. Mr. Andersson states that in Damara Land it is "rather a scarce species, much more so than *Vidua regia*; it only occurs during the rainy season, and is generally seen in pairs or in very small flocks."

*Habits.*—In addition to its wide range, this species of Widow Bird, in South Africa, everywhere largely outnumbered its congeners, and in many districts is a very common bird. During autumn and winter they occasionally collect in very large flocks, frequently mingled with those of the smaller Weavers and Waxbills. In summer they disperse in smaller parties, each consisting of a single male and from ten to forty or even fifty females. The Pin-tail Widow Bird is much more lively and active in its movements than are the two other species of the genus, and the cock is, notwithstanding his long tail, an excellent flier. As Ayres remarks, "During the breeding season, when the wonderful tail of the cock bird is fully developed, he will sometimes rise until nearly out of sight, when he suddenly descends with much velocity, and if approached makes off with ease and swiftness." The same gentleman writes, "The male of this species has a curious habit of hovering over his mate when she is feeding on the ground, bobbing up and down as you see the Mayflies and Midges do on a summer's evening in England. This exercise he generally continues some minutes without resting." Like the other Widow Birds the present species feed upon small seeds, principally grass-seeds, also upon small insects and their eggs. Its ordinary call-note is a sharp chirp but in spring the male utters a soft warbling song from the top of a bush or tall weed. In Natal this species breeds during the wet season, from November to the end of February or beginning of March. A somewhat openly woven domed nest of fine grass is suspended between the stems of a thick grass tuft a few inches off the ground, the ends of the growing grass being tied together over the nest so as to completely conceal it. The only nests that I have seen contained young birds, from three to four in number. The eggs have not been described.

A nest brought to Heuglin in Abyssinia, and ascribed by him to the present species is, from the description, obviously that of one of the African Tailor-birds.

*Tetraenura*

78. **Vidua regia.** Shaft-tailed Widow Bird.

*Emberiza regia*, Linn. *Syst. Nat.* i, p. 313 (1766).

*Vidua regia*, Cuvier, *Règne Anim.* i, p. 389 (1817); Layard, *B. S. Afr.* p. 188 (1867); Gurney in Andersson's *B. Damara Land*, p. 181 (1872); Buckley, *Ibis*, 1874, p. 381; Holub and Pelzeln, *Beitr. Orn. Südaf.* p. 123 (1882); Shelley, *Ibis*, 1882, p. 354, 1886, p. 342; *id.* *B. Afr.* i, p. 23 (1896); Sharpe, ed. Layard's *B. S. Afr.* pp. 453, 848 (1884).

*Tetraenura regia*, Reichenb. *Singv.* p. 61, Tab. xxvi. figs. 217, 218 (1861); Sharpe, *Cat. B. M.* xiii, p. 209.

*Description.* *Adult male in breeding plumage.*—Above, crown, back, wing-coverts, secondaries, and four central tail-feathers black, remaining tail-feathers brown, with a white spot near the end of the inner web; bastard wing, primary coverts and primaries brown edged with whitish-brown; a collar round the back of neck, sides of neck, cheeks, and entire under surface of body tawny-buff, darker on the sides and flanks; sides of vent and under tail-coverts black; a tuft on the flanks and under wing-coverts white; thighs tawny.

Iris hazel; bill and feet red.

Length to end of longest tail-feathers, 12·00; exclusive of long feathers 4·25; wing 2·90; tail 9·50, exclusive of long feathers 1·75; tarsus 0·60; culmen 0·40.

The four central, elongated tail-feathers are webbed at their ends for from two to three inches, the rest of them consists of bare shaft.

*Adult female.*—Resembles the female of *Vidua paradisæa*, but lacks the reddish-buff crown and eyebrow, also the black streak over the ear-coverts, the crown being whitish with a lateral streak of dusky, the centre streaked with brown; a white spot on the inner webs of the outer tail-feathers, as in the male.

Length 4·20; wing 2·80; tail 2·00.

*Young of the year.*—Nearly uniform brown, but of a lighter shade than the young of *Vidua principalis*, the general colour of the lower surface of the body being buff-yellow; eyebrow, ear-coverts and sides of face buff-yellow.

*Adult male in winter.*—Closely resembles the female, but is a little larger.

*Distribution.*—From Colesberg, in Cape Colony, to the Zambesi River, Damara Land and Benguela. From the Vaal River to the Zambesi (Holub). By no means uncommon in Damara Land and the adjacent parts during the wet season (Andersson); fairly abundant near Kanye, in the Matabili country; several seen chasing each other about near Selenia Pan (Ayres); not uncommon at Tati (Frank Oates); once met with in Benguela (Anchieta).

*Habits.*—I have only had limited opportunities of observing this species in Natal, where I have found it frequenting much the same localities as the commoner *Vidua paradisæa*, grassy plains and marshy ground interspersed with groves of trees or bushes. It is polygamous, each male in spring being accompanied by from ten to twenty females. At this season the beautiful cocks are very pugnacious and are constantly fighting and chasing one another, their long tails in no means incommoding their flight, as is the case with *Vidua paradisæa*. They are, indeed, of much more active habits than are the latter birds. Their call-note is a sharp chirp, occasionally uttered, but the cocks, in moments of excitement, indulge in a short and rather feeble song. They feed almost entirely on grass seeds. Although I have never found a nest, I have every reason to suppose, from having on several occasions carefully watched the birds, that each female builds a separate one in the long grass, the cock not interfering, beyond keeping watch and warning the hens by his alarm-call, should danger approach.

*Steganura*

76 79. ***Vidua paradisæa*.** *Paradise Widow Bird.*

*Emberiza paradisæa*, Linn. *Syst. Nat.* i, p. 312 (1776).

*Vidua paradisæa*, Cuvier, *Règne Anim.* i, p. 389, note (1817); Kirk, *Ibis*, 1864, p. 332; Gurney in Andersson's *B. Damara Land*, p. 181 (1872); Barratt, *Ibis*, 1876, p. 207; Shelley, *Ibis*, 1882, p. 207; *id.* *Ibis*, 1886, p. 342; 1888, p. 302; *id.* *B. Afr.* i, p. 23 (1896).

*Steganura paradisæa*, Bp. *Consp.* i, p. 449 (1850); Sharpe, *Cat. B. M.* xiii, p. 211 (1890); Butler, *Foreign Finches in captivity*, p. 282, pl. ♂ and ♀ (1894).

*Vidua verreauxi*, Sharpe, ed. Layard's *B. S. Afri.* pp. 452, 848 (1884); Ayres, *Ibis*, 1885, p. 345.

*Steganura verreauxii*, Holub and Pelzeln, *Orn. Südafri.* p. 123 (1882).

77 S- *ancupum obtusa*.  
Short Tailed Paradise Widowbird



*Description. Adult male in breeding plumage.*—Entire head, face and throat deep black; a collar round the back of neck, passing down the sides of neck to join the same colour on the breast, bright mahogany red, fading on the abdomen into buff; thighs, vent and under tail-coverts black; axillaries and under wing-coverts white tinged with rufous and black; edge of wing mottled black and white; remaining upper surface, including the wing-coverts, secondaries and tail black; primaries light brown edged with whitish; on each side of the lower back a white spot.

Iris reddish-brown; bill black; legs and feet brown.

Length to end of longest tail-feathers 14·75, exclusive of the long feathers 5·25; wing 3·00; tail 12·00; exclusive of long feathers 2·50; length of two longest feathers 12·00; breadth 1·50; length of two central feathers 4·00, the bare shafts extending 2·00 beyond this, breadth 2·00; attached to the base of each long feather is a hair-like filament of the same length as the feather; originally these filaments adhered to the margin of the outer web of each feather, becoming detached as soon as the feathers reached their full growth. According to Dr. Butler, the elongated tail-feathers decrease in breadth but increase in length with the age of the bird, the longest feathers in a very old cage bird measuring  $13\frac{5}{8}$  inches. Tarsus 0·65; culmen 0·45.

*Adult female.*—Above reddish-brown streaked with black; wing-coverts brown, margined externally with reddish-brown; quills dusky edged with reddish-brown; upper tail-coverts black margined with white; tail feathers blackish-brown slightly tipped with white and edged with rufous; crown sandy-buff slightly streaked with black and bordered on each side by a broad streak of black; a broad eye-brow buff; lores and feathers round eye white; ear-coverts pale sandy-buff streaked above with black; sides of neck tawny streaked with black; cheeks and under-surface of body buff-white, washed with tawny red on the breast, side and flanks, the breast slightly streaked with black at the sides; thighs, under-tail and wing-coverts white, the outer under-wing coverts with black bases; axillaries tawny-buff.

Iris brown; bill light brown; feet brown.

Length 6·00; wing 3·00; tail 2·50; tarsus 0·65; culmen 0·40.

The male in winter closely resembles the female in plumage.

*Young of the year.*—Uniform ash-brown, the head greyer, also the face and throat; breast and sides tawny-brown; lower breast, abdomen and under tail-coverts white; bill brown.



*Distribution.*—From the neighbourhood of King William's Town in Eastern Cape Colony, to the eastward through Natal, Zululand, the Eastern Transvaal and Mosambique to Abyssinia; and from thence, through the valley of the White Nile, to Senegambia. It is not uncommon in some parts of Natal and the Eastern Transvaal, in the latter country in the valleys of the Limpopo and Sabi Rivers, and on the line of the Pretoria and Delagoa Bay Railway.



*Vidua paradisica.*

*Habits.*—This species, nowhere very abundant in South Africa, is still not rare in some parts of Natal and the Eastern Transvaal, in rather open "bush-veldt"; localities in which little oases of grass are more or less surrounded by thorny bushes. The handsome cock, in spring and summer, is fond of perching on a prominent bush, from which he takes short undulating flights, returning invariably to the same perch. Occasionally he will hover for a few seconds over the grass in which one of his little brown mates is hidden, for he has many, from ten to fifty or more. At short intervals he utters a flute-like note, and now and then a few bars of his love song. When at rest the longest tail feathers are allowed to hang down, but in flight they are carried horizontally. Like the other Widow Birds this species feeds almost entirely on grass-seeds. The change of plumage, from winter to spring livery, in the male is completed in about six weeks. I have never been able to find the nest of this species, nor, so far as I have been able to ascertain, has anyone been more fortunate in this respect than myself. Dr. Russ has, however, succeeded in getting it to breed in confinement, by turning a cock with three hens into a large room. In November a sort of double nest was built on the wire bottom of a high hanging cage. One nest was shaped like a baker's oven, roofed over and neatly rounded; the other was a flat and loosely constructed hollow. The first nest, when examined, contained three dead young ones, the other a single living one, which was fed by two females. The male did not trouble himself about either the nest or young.

*V. paradisica*  
Laysan  
G. G. G.  
was here  
Friedman  
in 1924  
after he  
first of 4  
wintered  
Laysan  
P.O. Skipton  
Brazzaville  
a nest was  
aflame, and  
the nest  
was  
destroyed

*V. paradisica*  
Dr. Williams report & several other collectors  
have since found this bird nesting in such places  
of which I have no record of the bird  
making a nest  
11/2/76

Genus VI. **HYPOCHERA.***Type.***Hypochera**, Bonaparte, *Conspectus*, i, p. 450 (1850) ...*H. ænea*.

Bill short, conical, broad at the base, the culmen curved, somewhat swollen and rounded, pointed at the tip. Nostrils basal, the opening rounded and almost entirely hidden by nasal plumes. Wings moderately long, the outer quill minute, the second shorter than the third, the fourth and fifth equal and longest; tail short and nearly square; tarsus as long as the middle toe, covered anteriorly with broad scales; toes slender and rather short, the lateral toes nearly equal, the outer united at its base; claws small and curved. Plumage: in winter the male like the female; in summer the male with a special breeding dress quite unlike that of the hen.

About seven species and races are included in the genus, all confined to the Ethiopian region. One species and two races range into South Africa.

The *Hypocheræ* or Short-tailed Widow Birds form a connecting link between the *Viduæ* or Long-tailed Widow Birds and the *Fringillidæ*, or Finches. In their seasonal changes of plumage, apart from the assumption of a long tail by the male in spring, in the colours of the females and in their general habits they resemble the *Viduæ*, but they build their nests in holes of walls and buildings and lay white eggs. Dr. Russ, from observations made on the northern *H. ænea* in confinement, is led to remark, "The 'Atlas-Bird' is commonly numbered among the Ornamental-finches, but nevertheless incorrectly, for he proves his correspondence with the Whydah-finches in nearly every particular; he has the yearly change of colour, the fowl-like scratching, the jumping-flight love-sport, as well as the tempestuous disposition."

*Key to the Species.*

- a. Entire head and body in the male during the breeding season dull purplish-black with but little gloss, sometimes with a white patch on each side of the lower back ..... *H. funerea*, p. 153.
- b. Head and body in the male at the corresponding season deeper and more glossy purplish black ..... *H. f. nigerrima*, p. 154.
- c. Head and body in the breeding male greenish-black glossed steel green ..... *H. f. amauroptera*, p. 154.

981  
80. **Hypochera funerea.** *Black Widow Finch.*

*Fringilla funerea*, *De Tarragon*, *Revue Zool.*, 1847, p. 180.

*Tiaris funerea*, *Gray*, *Genera B.* ii, p. 375 (1849).

*Hypochæra funerea*, *Sharpe*, *Cat. B. M.* xiii, p. 310 (1890).

*Hypochera funerea*, *Shelley*, *B. Afr.* i, p. 23 (1896).



*Hypochera funerea.* ♂.

*Description.* *Adult male in summer.*—Entire head and body, as well as the wing-coverts and inner secondaries, purple-black, slightly glossy, with or without a tuft of white feathers on each side of the lower back; primary wing-coverts and quills, also the outer secondaries light brown; tail-feathers light brown edged with whitish; axillaries, under wing-coverts and inner margin of the quills buff.

Iris brown; bill white; feet red.

Length 4·25; wing 2·70; tail 1·60; tarsus 0·55; culmen 0·40.

*Adult female.*—Above brown, each feather with a dark centre; wing and tail-quills brown with paler edges; eyebrow whitish with a dusky streak above; sides of face whitish; below ash-white, darker on the sides and flanks.

Length 4·00; wing 2·50; tail 1·40; tarsus 0·55; culmen 0·40.

*Adult males in winter and young males* closely resemble the female.

*Distribution.*—From Natal through Zululand, Portuguese East Africa and the Eastern Transvaal to Nyasaland and German East Africa; doubtfully from Senegambia and the Niger.

Weenan Natal (Arnold); Berg Mountain, Natal (Gordge); Zomba, Nyasaland (Whyte).

*Habits.*—Very little has been recorded regarding the habits of the present Widow Finch; those of the closely allied *H. ultramarina* of North-east Africa are much better known, thanks to Brehm and Heuglin, and as they are probably very similar, I have taken the following account of the more northern bird from the latter author, who states that in Nubia "it is an abundant resident



and almost exclusively an inhabitant of the native villages, together with *Lagonosticta minima*. It is a lively little bird, which enters the houses in search of food and water. The males change to the breeding plumage at the commencement of the rainy season. These birds prefer the clay huts of the Nubians to the straw houses of the Soudanese, and usually a few pairs live about the same farm-building. The song is not remarkable, the call-note a very sharp, and rather harsh chirp. Brehm states that the nest is built indifferently upon trees, under the rafters of roofs, in the gable ends, and in holes in walls. It resembles that of a House-sparrow in being a large but orderly heap of straws, rags, cotton, feathers, and so on; the depression being lined with hairs and threads. Occasionally this bird uses the deserted nest of a swallow and sometimes a hole in a tree. The eggs are white and from three to five in number." All the *Hypocheræ* feed on small seeds which they find on the ground, frequently by scratching like a fowl. Occasionally they take small insects.

78<sup>er</sup> 81. **Hypochera funerea nigerrima.** *Purple Widow Finch.*

*Hypochæra nigerrima*, Sharpe, *P.Z.S.* 1871, p. 133; *id. Cat. B. M.* xiii, p. 311 (1890); *Shelley, B. Afr.* i, p. 23 (1896).

*Description.*—(From *Cat. B. M.*). "Adult (type of species). Similar to *H. funerea*, and with the same brown wings, but with the plumage deep purplish black above and below. Total length 4.4 inches; culmen 0.4; wing 2.6; tail 1.4; tarsus 0.55."

*Distribution.*—"From Angola to the Upper Congo Region and south to the Zambesi" (Kirk); Zomba, Nyasaland (Whyte).

78<sup>o</sup> 82. **Hypochera funerea amauroptera.**

*Steel-coloured Widow Finch.*

*Amadina nitens*, Layard, *B. S. Afr.* p. 20 (1867).

*Hypochæra ultramarina* (nec Gm.), Gurney in Andersson's *B. Damara Land*, p. 175 (1872); Sharpe, ed. *Layard's B. S. Afr.* p. 457 (1884) pt.

*Hypochæra amauropteryx*, Sharpe, *Cat. B. M.* xiii, p. 309 (1890).

*Hypochera amauroptera*, Shelley, *B. Afr.* i, p. 23 (1896).

*Description.* *Adult male in summer.*—Entire head and body dark greenish-black glossed with steel-blue; wings brown.

Iris brown; bill whitish; feet red.

Length 4.10; wing 2.70; tail 1.55; tarsus 0.55; culmen 0.40.

*Adult male in winter*.—Closely resembles the female.

*Adult female*.—Like the female of *H. funerea*.

*Young*.—Resemble the female.

*Distribution*.—South Africa from the Transvaal to the Zambesi and Mosambique, extending westward to Ovampo Land (Sharpe).

Zambesia "in large numbers. Everywhere common" (Kirk); Rustenburg, Transvaal (Lucas); Ondongo, Ovampo Land (Andersson).

*Habits*.—Resemble those of the other species of the genus. Mr. Barratt writes in the "Ibis" for 1876, p. 207, under the synonym *H. chalybeata*, "I found a few of this species in and around a large fruit-garden, a few miles from Rustenburg. The ones procured were scattered about the hedgerows, where I shot them." Sir John Kirk remarks that the birds are "extremely variable in plumage and feed on grass-seeds."

## Family V. FRINGILLIDÆ.

Bill very variable, but usually more or less stout and conical, the edges of the mandibles smooth, the nostrils close to the frontal plumes and nearer the culmen than the commissure. Wing with only nine primaries that are easily found, the outer, if present, being very minute and often displaced by the growth of the next. Tail of twelve feathers. Tarsi covered at the sides by entire laminae, scutellated anteriorly. One complete moult in the year, in autumn, but a partial change of colour in spring, due to the falling off of the worn feather tips. Frequently gregarious and more or less arboreal in their habits, omnivorous in their diet, and generally good songsters. With the exception of the Sparrows and one or two South American species, all the Finches build open nests, usually in trees or bushes, and feed their young on insects and on partially digested food from their crops. Their eggs vary greatly but are usually coloured and spotted or streaked.

About five hundred and sixty species of Finches are known, distributed over the entire globe excepting only Australasia and the Antarctic regions.

Dr. Sharpe, in the twelfth volume of the Catalogue of Birds in the British Museum, divides the *Fringillidæ* into three subfamilies, as follows:—

- a. Nasal bones produced backwards beyond the front of orbit; mandible very powerful and deep posteriorly; angle of gonys very slight ... *Coccothraustinæ*.
- b. Nasal bones not produced beyond the front of orbits.
  - a<sup>1</sup>. Cutting edges of mandibles in contact throughout; the angle formed by the lower mandible at chin very slight ..... *Fringillinæ*.
  - b<sup>1</sup>. Cutting edges of mandible not everywhere in contact, a gap being left. Angle at chin more acute..... *Emberizinæ*.

The *Coccothraustinæ* are not represented in South Africa.

### Subfamily I. FRINGILLINÆ.

This subfamily includes the Sparrows, Canaries and Seed eaters, as well as other Finches with a bill of medium size, with the edges of the two mandibles in contact throughout. They have one complete annual moult, in autumn, and a change of colour in spring from the falling off of the tips of the feathers. The young resemble the females; the latter are generally of duller colours than the males. Sixty species are Ethiopian, eighteen South African.

#### *Key to the Genera.*

- a. Wing longer: falling short of the tail-tip by less than the length of the tarsus; nostrils exposed; a yellow throat-spot ..... *Petronia*, p. 157.
- b. Wing shorter: falling short of the tail-tip by more than the length of the tarsus; nostrils more or less concealed by plumes; no yellow throat-spot.
  - a<sup>1</sup>. Bill somewhat elongated, the upper mandible deeper than the lower.
    - a<sup>2</sup>. Head uniform, unstreaked ..... *Passer*, p. 159.
    - b<sup>2</sup>. Head dark brown streaked with white ..... *Poliospiza*, p. 164.
  - b<sup>1</sup>. Bill shorter, the upper mandible about as deep as the lower; both culmen and gonys much curved.
    - c<sup>2</sup>. No chestnut-red in the plumage ..... *Serinus*, p. 166.
    - d<sup>2</sup>. Back chestnut-red or brown..... *Alario*, p. 179.
  - c<sup>1</sup>. Outline of culmen and gonys, as well as the sides of bill much straighter ..... *Chrysomitris*, p. 181.

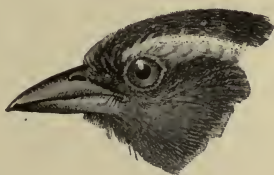


Genus I. **PETRONIA.***Type.***Petronia**, *Kaup, Syst. Nat.* p. 153 (1829) ..... *P. petronia*.

Bill strong and somewhat swollen, the culmen slightly curved towards the tip, the edges of the upper mandible turned inwards near the point, the gonys ascending rather abruptly towards the extremity, forming a distinct angle. Nostrils exposed. Wings long (longer than in *Passer*), falling short of the end of the tail by less than the length of the tarsus. Plumage plain and sparrow-like, but with a large yellow spot in the centre of the lower throat in the South African and some of the other species.

The genus *Petronia* contains six species of sparrow-like birds found in South and Central Europe and over the greater part of Asia and Africa. They differ from the true Sparrows in having longer bills and wings.

They frequent rocky localities, and hence are commonly known as Rock Sparrows, are gregarious in their habits, feed on seeds and insects, and build in holes and crevices of rocks. They lay spotted eggs, which resemble those of the true Sparrows. The sexes differ but slightly in colour.

*Petronia petronella.*

*Quercetorum*      *Yellow thro*  
 754 83. **Petronia petronella.** *South African Rock Sparrow.*

*Fringilla petronella* ? *Licht.*; *fide Gray, Hand-b. B.* ii, p. 84 (1870).

*Xanthodira flavigularis*, *Sund. Æfv. K. Vet.-Akad., Förh. Stockh.* (1850), p. 98.

*Petronia petronella*, *Bp. Consp.* i, p. 513 (1850); *Gurney in Anderson's B. Damara Land* p. 186 (1872); *Sharpe, ed. Layard's B. S. Afr.* pp. 481, 850 (1884); *id. Cat. B. M.* xii, p. 297 (1888).

*Petronia flavigula*, *Shelley, Ibis* (1882), p. 357; *id. B. Afr.* i, p. 19 (1896).

*Description. Adult male.*—Above brown, the mantle mottled with black; wing-coverts brown, the middle and greater tipped

with buff; quills dark brown, edged with reddish-brown, the secondaries slightly tipped with whitish; tail-feathers brown, edged with brownish-white; crown dark brown; lores dusky; eyebrow cream-coloured; ear-coverts brownish; cheeks brown; a streak of dark brown over the ear-coverts; below brown, a patch of bright yellow in the centre of the lower throat; the chin, centre of abdomen and under tail-coverts whitish; axillaries and under wing-coverts pale brown; under surface of quills dusky, their inner margins grey.

Iris brown; bill horn-brown, lighter below; legs and feet brown.

Length 6.50; wing 3.85; tail 2.40; tarsus 0.80; culmen 0.65.

*Adult female*.—Is somewhat smaller and has the yellow throat-spot smaller and less bright.

Length 6.25; wing 3.55; tail 2.35.

*Young*.—Like the female, but paler; the throat spot hardly visible.

*Distribution*.—From the neighbourhood of Cape Town to Damara Land, on the west coast; to the eastward, through Cape Colony and Natal into the Transvaal, ranging as far north as the Zambesi, and across that river into Nyasaland, where it has been obtained by Mr. Whyte at Zomba.

*Habits*.—Although this Sparrow may be sometimes seen hopping about rocks, it is more frequently to be met with among trees, and especially Euphorbias, from the bark of which it appears to glean a considerable amount of food in the shape of small beetles and other insects. Mr. T. Ayres writes regarding its habits in Mashonaland: "These Sparrows are not uncommon about the Umvuli, frequenting the high trees and feeding much as the Tomtits do, hanging about the outer twigs and eating the young buds, &c.; as, however, food of all kinds is scarce for birds, this may not be a usual habit. They are now mostly in pairs, and their loud, sparrow-like note, often repeated in the early morning, attracts one's attention to them."

This species appears to feed very largely on insects, which it finds in crevices of rocks and in the bark of trees. It also eats small seeds of grass and various weeds. It builds a large sparrow-like nest of dry grass and feathers in the hole of a tree or rock, and lays three or four eggs, which resemble those of the Cape Sparrow, but they are slightly larger as a rule, and more sparingly but distinctly spotted with dark, slaty-brown.

Genus II. **PASSER.***Type.***Passer**, *Briss, Orn.* iii, p. 71 (1760) ..... *P. domesticus*.

Bill strong and hard, somewhat conical, but bulging above and below, longer than deep; the upper mandible larger than the lower, the edges nearly plain. Nostrils basal, lateral, rounded, nearly hidden by projecting and recurved frontal plumes. Gape straight. Wings with the first primary small and attenuated, but distinctly developed, the third and fourth rather the longest, the second nearly as long. Tail moderate and nearly square. Tarsi stout, nearly as long as the middle toe, scutellated anteriorly, the sides covered by a single plate. Claws moderately curved and rather short.

The genus *Passer* contains the well-known Sparrows, birds which are found over the greater portion of Europe, Asia and Africa, and some species of which have been of recent years introduced into North America and Australia, where they have increased enormously. Twenty-six species of the genus are described, and three of these are resident in South Africa. One of these, *Passer arcuatus*, has, since the advent of Europeans, adapted itself to its altered surroundings, and is now chiefly known as an inhabitant of towns and villages. The majority of the Sparrows are of social habits, living in large or small communities. They feed both on grain and insects, and build, sometimes large and warmly lined domed nests in trees or bushes, at others more open nests in holes of trees, rocks or buildings. They lay from three to six eggs, which are usually much mottled and spotted with brown and slate-colour, and rear several broods in a season.

*Key to the Species.*

## a. A white eyebrow.

a<sup>1</sup>. Crown, ear-coverts, cheeks and throat black... *P. arcuatus*, ♂, p. 160.b<sup>1</sup>. Crown, ear coverts, cheeks and throat dusky-brown ..... *P. arcuatus*, ♀, p. 160.

## b. A reddish-buff eyebrow.

c<sup>1</sup>. Crown, back of neck and ear-coverts grey;throat black ..... *P. motitensis*, ♂, p. 162.d<sup>1</sup>. Crown and back of neck brown; ear-covertswhitish; throat dusky..... *P. motitensis*, ♀, p. 163.

## c. No eyebrow.

e<sup>1</sup>. Crown, neck and sides of face dark grey;throat whitish; sexes alike in plumage ..... *P. diffusus*, p. 163.



752<sup>h</sup>  
 84. *Passer arcuatus*. *Cape Sparrow*.  
*Melanerpes melanurus*  
*black-throated*

*Fringilla arcuata*, Gm. *Syst. Nat.* i, p. 912 (1788).

*Passer arcuatus*, Gray, *Gen. B.* ii, p. 373 (1849); Layard, *B. S. Afr.* p. 204 (1867); Gurney in Andersson's *B. Damara Land*, p. 185, (1872); Holub and Von. Pelz. *Beitr. Orn. Südafr.* p. 131 (1882); Sharpe, ed. Layard's *B. S. Afr.* pp. 478, 850 (1884); *id.* *Cat. B. M.* xii, p. 333 (1887); Shelley, *B. Afr.* i, p. 20 (1896).

"Mossie" of Dutch Colonists.



*Passer arcuatus*. ♂.

*Description.* *Adult male in summer.*—Above, cinnamon-red tinged with grey on the back of neck and mantle; lesser wing-coverts cinnamon-red; middle coverts black tipped with white; greater coverts black edged with brown and tipped with white; quills black edged with brown; upper tail-coverts brown; tail-feathers black edged with rufous; crown black; eyebrows, sides of neck and posterior half of cheeks white; lores, feathers round eyes, ear-coverts, anterior half of cheeks, throat, and upper breast black; rest of under surface dull white tinged with grey on the sides and thighs; axillaries and under wing-coverts white; under surface of quills dusky with fulvous inner margins.

Iris brown; bill black; legs and feet brown.

Length 6·00; wing 3·25; tail 2·45; tarsus 0·75; culmen 0·55.

*Adult male in winter.*—Above, the plumage greyer than in summer; the black markings on the head and throat tinged with brown.

*Adult female.*—Less bright than the male; the upper surface browner; crown, sides of face, ear-coverts and throat dusky-brown; a streak bordering the back of crown and a patch behind the cheeks buff-white; below, the breast and abdomen buff-white. It is also smaller.

Length 5·60; wing 2·95; tail 2·30.

752<sup>a</sup> *B. m. - Damaraensis*  
*Damara Bk. Linnaeus Sparrow*

*Young*.—Resemble the female, but the throat is lighter.

*Distribution*.—South Africa: on the west coast from Cape Town to Benguela; eastward to Natal and the Transvaal. The range of this Sparrow in South Africa is, however, by no means general, and there are many districts in which it is never seen. Andersson remarks: "this Sparrow is very abundant all over Damara and Great Namaqualand, and extends as far south as the Cape." Anchieta procured a single specimen in Benguela. 'I found it quite common on the coast of Little Namaqualand and at Saldanha Bay. At Cape Town it abounds and has become perfectly acclimatised to town life; in many parts of the Great Karroo it is a common species, as at Prince Albert, but in the fertile country to the south of the Swartberg Range it is very scarce, and it has never been heard of in the Knysna District up to the present time, 1898. Mr. Marais' observations agree with those of W. Atmore, who wrote to Layard, that they are "scarce in the Lange Kloof and at George, while at the Knysna there are none at all." Layard remarks: "We found none at Port Elizabeth, (though Mr. Rickard says they are to be met with on the Amsterdam Flats), nor were any to be seen at Van Staden's River or Uitenhage. One pair were noticed at the half-way house between the former place and Grahamstown; at the latter place they were very scarce, none at Highlands, and a single colony at Table Farm." This species is very common on the Orange River, according to Dr. Bradshaw. In Natal it is absent from the coast districts, but becomes common in Upper Natal, in the neighbourhood of Newcastle, and elsewhere. It ranges into the Transvaal and Southern Bechuanaland. Mr. Ayres found many at Spalding's, on Hart River, in February. It is said not to be found in Griqualand East.

*Habits*.—Notwithstanding Layard's statement that, "The 'Mossie,' like its cousin, the English bird, is essentially a 'cit.', in the country you certainly find him, but never away from human habitations"; this Sparrow is still to be found living a perfectly wild life, at a great distance from human habitations, in many parts of Little Namaqualand and the Great Karroo desert. Here it affects the neighbourhood of mimosa trees, and appears to flourish in the most dreary and waterless districts, feeding on small seeds and insects and building its nest in some thorny bush or tree. It seems probable that this Sparrow was originally a desert bird, and has comparatively recently changed its habits in certain districts and adapted itself to a town or village life. In autumn and winter

these Sparrows are frequently found in considerable flocks, often consorting with other Finches and Weaver-birds; even when nesting they frequently form social communities and build many nests in the same bush or tree; occasionally I have seen a bush so packed with nests that they formed a solid mass much like one of the collective nests of a Social Weaver-bird. Very little in the way of food comes amiss with the Cape Sparrow; various small seeds, grain, berries, fruit, green peas, and buds of trees are all acceptable, as well as the majority of insects, grubs, the larvæ of various flies, caterpillars, small beetles, locusts, grasshoppers and termites. In its natural feral state this is a somewhat shy and unobtrusive bird, but in Cape Town it has all the tameness and assurance of a London Sparrow, the same ability to take care of itself, and the same pugnacity and combativeness. Its note, also, a sort of "chissick," is to my ear exactly similar to that of the English bird. The Cape Sparrow builds indiscriminately in holes of rocks or buildings, or in bushes or trees, but usually in the latter. The nest, a domed structure, is more or less flask-shaped, with an entrance from a few inches to more than a foot in length, through a horizontally projecting neck. It is constructed of small sticks, straws, dry grass, occasionally interwoven with rags and bits of paper, the cavity being warmly lined with wool and feathers. Two or three broods are reared in the year, the first eggs being laid in September. These are from three to six in number, and vary considerably in size, shape and colour; they are usually of a pale greenish-blue ground colour, thickly blotched and mottled with various shades of brown and lavender. They average  $0.75 \times 0.58$ . They are hatched at the end of twelve days. The young remain in the nest for about twenty-four days, during which time they are fed on grubs, caterpillars, and partially digested food from the crops of the old birds.

751 85. **Passer motitensis.** *Greater South African Sparrow.*

*Passer motitensis*, *Smith, Ill. Zool., S. Afr., Birds*, pl. 114 (1849); *Layard, B. S. Afr.* p. 204 (1867); *Gurney in Andersson's B. Damara Land* p. 186 (1872); *Sharpe, ed. Layard's B. S. Afr.* p. 480 (1884); *id. Cat. B. M.* xii, p. 324 (1888); *Shelley, B. Afr.* i, p. 20 (1896).

*Description.* *Adult male.*—Above, pale reddish brown streaked with black on the mantle and scapulars; the upper tail-coverts tinged with grey; lesser wing-coverts like the back; middle



coverts blackish tipped with white, the greater blackish edged and tipped with buff; quills blackish edged with rufous; tail-feathers dark brown edged with paler brown; crown and back of neck grey; a broad eyebrow reddish-buff; in front of this a white spot; a black streak from the lores under the eye and above the ear-coverts; ear-coverts grey; cheeks white, extending along the sides of neck; throat and upper chest black; rest of under surface white, tinged with brown on the sides and flanks; axillaries reddish-yellow; under wing-coverts white, their bases dusky; quills below dusky, their inner margins grey.

Iris dark brown; bill brown; legs and feet pale brown.

Length 6.25; wing 3.25; tail 2.35; tarsus 0.85; culmen 0.60.

*Adult female*.—Above, fulvous-brown streaked with black; crown and back of neck brown; throat blackish; breast and sides pale brown; abdomen and under tail-coverts white.

Length 6.20; wing 3.25; tail 2.25.

*Distribution*.—From the Orange River to Lake N'gami and North Damara Land; through the Northern Transvaal and Matabili and Mashonaland to the Zambesi River.

*Habits*.—Andersson gives the following note in the "Birds of Damara Land," p. 186:—"I first met with its nest at Omapju, on January 5, 1867; it was placed on the top of a thorn bush, about seven feet from the ground; and I subsequently met with several other nests during the same month. The nest is large, and is composed of coarse grass outside and fine grass within, and has an additional lining of feathers and other soft and warm materials; it is furnished with a long entrance, sometimes a foot or more in length, which ends in a deep and wide hollow. The eggs are from three to six; but the most frequent number is four; they are larger than the eggs of *P. arcuatus*, and are invariably covered with a glutinous matter which it is difficult to remove, even with the help of water."

*diffusus*

86. **Passer diffusus.** *Southern Grey-headed Sparrow.*

*Pyrgita diffusa*, Smith, *Rep. Exp. Centr. Afr.* (1836), App. p. 50.

*Passer diffusus*, Gray, *Gen. B.* ii, p. 373 (1849); *Layard, B. S. Afr.* p. 204 (1867); *Gurney in Andersson's B. Damara Land*, p. 187 (1872); *Sharpe, ed. Layard's B. S. Afr.* pp. 480, 850 (1884); *id. Cat. B. M.* xii, p. 336 (1888); *Shelley, B. Afr.* i, p. 20 (1896).

*Passer simplex*, *Layard, B. S. Afr.* p. 205 (1867).

*Description. Adult male*.—Above, dark reddish-brown; lesser and middle wing-coverts like the back, the inner middle coverts

tipped with white ; greater coverts brown edged with pale reddish-brown ; quills and tail-feathers dark brown edged with reddish-brown ; crown, sides of face and neck dark grey ; under surface pale grey fading into dull white on the abdomen and under tail-coverts ; axillaries and under wing-coverts brown.

Iris hazel-brown ; bill horn-brown ; legs and feet brown.

Length 6·00 ; wing 3·35 ; tail 2·45 ; tarsus 0·75 ; culmen 0·40.

*Adult female*.—Rather less bright in colour and slightly smaller in size. Wing 3·15 ; tail 2·35.

*Distribution*.—Northern and North-eastern Cape Colony ; the Orange Free State, and Upper Natal to the north of Howick, thence through the Transvaal and Bechuanaland to the Zambesi and Cunéné Rivers ; extending, on the east, into Nyasaland and as far north as Zanzibar, on the west through Angola to Senegambia. In Cape Colony it is a very common species in the valley of the Orange River ; in Natal it is “numerous and generally distributed in November from Ladysmith, as far down as Howick,” according to Majors Butler and Feilden and Captain Reid.

*Habits*.—Although by no means an uncommon bird in many districts, the presence of this Sparrow is frequently undetected owing to its somewhat unassuming colours as well as its shy habits. Unlike the common Cape Sparrow it avoids towns and villages and is more often met with at a distance from human habitations, either feeding on the ground or perched on trees or bushes. From the Cape Sparrow it is readily distinguished, not only by its less conspicuous plumage but by its sharper and shriller notes, as well as by its more rapid flight. Like all its congeners it is very omnivorous in its tastes, feeding indiscriminately upon small seeds of grass and millet, on wheat, berries, fruit and various insects, including grubs, caterpillars, and young locusts and grasshoppers. According to Andersson this species frequents the water in the morning and evening. It roosts, in small companies, in bushes and thickly foliated trees. Its nest I have never seen.

### Genus III. POLIOSPIZA.

*Type.*

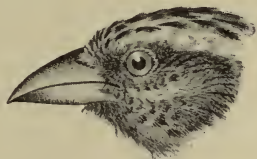
**Poliospiza**, Bp. *Conspectus*, i, p. 519 (1850) .....*P. gularis*.

Bill strong, conical and rather elongated, the maxilla somewhat deeper than the mandible ; nostrils basal, rounded and hidden by recurved frontal plumes. Wings rather short. Tail moderate and

slightly forked. Tarsus scutellated anteriorly, the sides covered by a single plate.

Plumage: crown brown, streaked with white in the typical species. Sexes nearly alike.

The genus contains six species of African Finches; one only is resident in and confined to South Africa. In their habits they resemble the other Seed-eaters or Canaries.



*Poliospiza gularis.*

767 *Relariss*  
87. **Poliospiza gularis.** *Streaky-headed Seed-eater.*

*Linaria gularis*, Smith, *Rep. Exp. Centr. Afr.* App. p, 49 (1836).

*Fringilla gularis*, Gray, *Gen. B.* ii, p. 372 (1849); *Layard, B. S. Afr.* p. 203 (1867).

*Fringilla striiceps*, *Layard, B. S. Afr.* p. 204 (1867).

*Poliospiza gularis*, *Bp. Consp.* i, p. 519 (1850); *Gurney in Andersson's B. Damara Land*, p. 183 (1872); *Sharpe, ed. Layard's B. S. Afr.* pp. 482, 850 (1884); *id. Cat. B. M.* xii, p. 343 (1888); *Shelley, S. Afr.* i, p. 20 (1896).

Streep-Kop Seisje (Streaky-headed Seed-eater) of the Dutch Colonists.

*Description. Adult male.*—Above, grey-brown slightly mottled on the back with dusky; lesser wing-coverts like the back; rest of wing and tail dusky brown, the feathers edged with brown and whitish; crown dark brown streaked with white; a slight eyebrow white; ear-coverts and cheeks dusky brown; sides of neck a lighter brown; throat white sparingly speckled with black; rest of under surface pale drab-brown, the abdomen lighter, the sides and flanks tinged with brown; under tail-coverts dull white streaked with dusky; axillaries and under wing-coverts light brown; under surface of quills dusky, their inner margins grey.

Iris hazel; bill horn-coloured; legs and feet pale brown.

Length 6·05; wing 2·95; tail 2·35; tarsus 0·70; culmen 0·55.

*Adult female.*—Similar to the male both in size and colour.

767b. ♂ = ♀. *Striiceps* Cape Streaky Headed Seed Eater



*Young of the year.*—The throat, breast and sides are tinged with reddish-brown and streaked with dusky.

*Distribution.*—Cape Colony ; most abundant in the south and south-east ; ranging into Great Namaqua and Bechuanaland on the north, into Natal and the Southern and Eastern Transvaal to the east. In the Colony this species is not uncommon in the neighbourhood of Swellendam, Knysna and Eland's Post. To the north of the Orange River it is only sparingly met with.

*Habits.*—In Cape Colony during autumn and winter these finches are met with in small parties of six or seven, generally in open bushy localities, where they feed on the ground on small grass and other seeds. According to Atmore they are fond of tobacco seed, chickweed and groundsel. If disturbed they utter a sharp "chirp" as they take flight and fly off to seek refuge in some thick bush, but as a rule they are rather silent birds. In September and October they build in bushes or low trees. The nest is open and cup-shaped, neatly and compactly constructed of dry grass and bents, lined with white cottony seeds and down. The eggs, three or four in number, are very faint bluish-white with usually a few dots or a single streak of dark purplish black towards the larger end.

They measure  $0.87 \times 0.62$ .

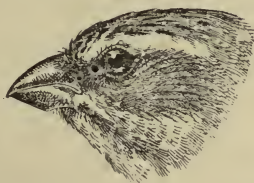
#### Genus IV. **SERINUS.**

*Type.*  
**Serinus**, Koch, *Syst. Zool.* p. 228 (1816) ..... *S. serinus*.

Bill strong, short, somewhat conical, but very broad at the base and with the distal half suddenly diminishing to the tip ; mandibles nearly equal in size, but the upper slightly the longer ; edges plain. Nostrils basal, round, and hidden by recurved frontal plumes. Gape straight. Wings : the first primary very small, the second, third and fourth nearly equal. Tail moderate, rather forked. Tarsus slender, shorter than the middle toe, scutellated in front, covered on each side by a single plate ; claws small and rather weak.

The genus *Serinus* includes the majority of the birds commonly known as Canaries, or, in South Africa, as Seed-eaters ; including the well-known "domestic" as well as the wild Cape Canary. About twenty-two species are known, distributed over Southern Europe, Western Asia, North-western India, and the greater part of Africa. Eleven species occur more or less frequently in South

Africa. The majority are gifted with good voices, and several of the species are pre-eminently brilliant songsters, and are, as a result, favourite cage-birds. All feed on both seeds and insects. They build open nests, and lay from three to six white, or bluish-white eggs, sometimes unspotted, but more often marked with black or brown dots and streaks. The young are fed on insects and on partly digested food from the crops of the parent birds.



*Serinus flaviventris.* ♀.

*Key to the Species (after Sharpe).*

- |                                                                             |                                    |
|-----------------------------------------------------------------------------|------------------------------------|
| a. Flanks unstreaked.                                                       |                                    |
| a <sup>1</sup> . Chin and throat yellow.                                    |                                    |
| a <sup>2</sup> . Sides and back of neck grey, crown yellowish               | <i>S. canicollis</i> , p. 168.     |
| b <sup>2</sup> . Sides and back of neck as well as the crown greenish.      |                                    |
| a <sup>3</sup> . Tail not tipped with white.                                |                                    |
| a <sup>4</sup> . Throat and abdomen yellow; breast and sides greenish ..... | <i>S. sulphuratus</i> , p. 169.    |
| b <sup>4</sup> . Entire under surface yellow.                               |                                    |
| a <sup>5</sup> . Above greenish streaked with dusky                         | <i>S. flaviventris</i> ♂, p. 170.  |
| b <sup>5</sup> . Above yellowish only slightly streaked .....               | <i>S. imberbis</i> ♂, p. 172.      |
| c <sup>5</sup> . Above brown-black.....                                     | <i>S. rendalli</i> ♂, p. 172.      |
| b <sup>3</sup> . Tail tipped with white .....                               | <i>S. icterus</i> ♂, p. 173.       |
| b <sup>1</sup> . Chin and throat white.                                     |                                    |
| c <sup>2</sup> . Rump yellowish.                                            |                                    |
| b <sup>3</sup> . Rump greenish-yellow .....                                 | <i>S. albigularis</i> , p. 174.    |
| c <sup>3</sup> . Rump bright yellow .....                                   | <i>S. crococygius</i> , p. 176.    |
| d <sup>2</sup> . Rump brown like the back .....                             | <i>S. leucopterus</i> , p. 177.    |
| b. Flanks streaked with dusky.                                              |                                    |
| c <sup>1</sup> . Chin black, throat yellow.....                             | <i>S. scotops</i> , p. 177.        |
| d <sup>1</sup> . Chin and throat white .....                                | { <i>S. flaviventris</i> ♀, p 170. |
| e <sup>1</sup> . Chin white, throat black .....                             | { <i>S. imberbis</i> ♀, p. 172.    |
|                                                                             | <i>S. angolensis</i> , p. 178.     |

*canicollis*

88. **Serinus canicollis.** *Cape Canary.*

*Crithagra canicollis*, *Swains. An. in Menag.* p. 317 (1837).

*Serinus canicollis*, *Bp. Consp.* i, p. 522 (1850); *Sharpe, ed. Layard's B. S. Afr.* pp. 488, 850 (1884); *id. Cat. B. M.* xii, p. 350 (1888); *Butler, Foreign Finches*, p. 27, pl. (1894); *Shelley, S. Afr.* i, p. 21 (1896).

*Fringilla canicollis*, *Grill, Zool. Anteckn.* p. 24 (1858); *Layard, B. S. Afr.* p. 201 (1867).

"Canarie" of the Dutch.

*Description. Adult male.*—Above, greenish-yellow, the back slightly mottled with dusky; rump and upper tail-coverts yellow and not mottled; wing-coverts greenish-yellow; quills black edged with yellow; tail-feathers dusky-brown edged externally with yellow; crown bright yellow, the occiput tinged with green; the back and sides of neck grey; lores dusky; ear-coverts grey; eyelids, sides of face, cheeks and under surface of body golden-yellow, brighter on the breast, the sides and flanks tinged with green; lower abdomen and thighs whitish; axillaries and under wing-coverts grey edged with yellow; under surface of quills dusky, their inner margins grey.

Iris dark brown; bill pale brown; legs and feet grey-brown.

Length 5·25; wing 3·10; tail 2·20; tarsus 0·55; culmen 0·40.

*Adult female.*—Above, the mantle and back browner than in the male, streaked with dusky-brown; crown pale yellow streaked with dusky; below a paler yellow.

Length 4·80; wing 2·90; tail 2·05; tarsus 0·55; culmen 0·40.

*Distribution.*—Resident in Cape Colony, Natal, the Orange Free State and the Transvaal. Introduced into Réunion.

*Habits.*—This well known and favourite cage-bird is, in its wild state, a common resident in nearly all districts that are overgrown with bushes or low trees varied with open glades and clearings. It is perhaps most abundant on the bush-clad lower slopes of hills and mountains as well as in gardens and shrubberies, and I have met with it in some numbers among the low scrub on the sandy coast of Little Namaqua Land. In autumn and winter small flocks frequent the more open pasture and ploughed land, to feed, with other finches and weaver-birds, on small seeds and insects that they find on the ground. The justly admired song of the Cape Canary is prolonged and very sweet, and is compared by Dr. Russ to that of a Lark. Individual birds, however, even in a wild state, differ remarkably in the singing powers, some being far superior to

1758. S. C. - Thompson's *Handbook Cape Canaries*



others in the richness and fulness of their notes. The cock of this species has, in confinement, been known to pair with the hen of both the Common Cage Canary and the Yellow-bellied Seed-eater.

In Cape Colony the Cape Canary usually breeds in September and October, in Upper Natal in October and November. The nest, neatly constructed and cup-shaped, is built in a thick low bush, of dry grass and bents, with sometimes a little moss, lined with hair, feathers, and downy seeds. The eggs, three or four in number, are white, faintly tinged with blue, and streaked and spotted at the obtuse end with purplish-brown and reddish-brown. They measure  $0.75 \times 0.55$ .

763 *Sulphurata* *Bulley*  
89. **Serinus sulphuratus.** *Large Yellow Seed-eater.*

*Loxia sulphurata*, Linn. *Syst. Nat.* i, p. 305 (1766).

*Crithagra sulphurata*, Swains. *Zool. Journ.* iii, p. 348 (1828); Layard, *B. S. Africa*, p. 218 (1867); Sharpe, ed. Layard, *B. S. Afr.* p. 486 (1884).

*Serinus sulphuratus*, Sharpe, *Cat. B. M.* xii, p. 352 (1887); Butler, *Foreign Finches*, p. 29, pl. (1894); Shelley, *B. Afr.* i, p. 21 (1896).

"Geel Saysie" of Dutch Colonists.

*Description.* *Adult male.*—Above, greenish-yellow streaked with blackish; rump and upper tail-coverts yellower and unstreaked; lesser wing-coverts unstreaked greenish-yellow; remaining wing-feathers and tail-feathers blackish edged with yellow; lores dusky; a broad eyebrow golden-yellow; crown and back of neck greenish-yellow streaked with blackish; feathers round the eye, ear-coverts and cheeks dull greenish; a broad band under the ear-coverts and a spot at base of lower mandible golden-yellow; throat golden-yellow; sides of neck, breast, sides and flanks pale greenish-yellow; rest of under surface, also the axillaries and under wing-coverts yellow; under surface of quills dusky with grey inner edges.

Iris hazel-brown; upper mandible dusky yellow; the lower pale yellow; legs and feet dusky brown.

Length 6.00; wing 3.25; tail 2.55; tarsus 0.75; culmen 0.55.

*Adult female.*—Slightly smaller and duller in colour; the yellow streak on the face smaller and less bright.

Length 5.75; wing 3.05; tail 2.50.

*Distribution.*—Throughout Cape Colony, the Orange Free State, and the greater part of Natal, extending into the Transvaal and thence northward to Masai Land in East Africa. In Cape Colony

763 *S. S. Sharpe Sharpe Seed Eater*

it occurs near Cape Town, and is abundant in the neighbourhood of Swellendam, Caledon, George, Beaufort West, and elsewhere. It is fairly common in many parts of the Orange Free State and Natal.

*Habits.*—This large and conspicuously-coloured Seed-eater is rather common in many parts of Cape Colony, both on open pasture land and in bushy localities. In winter these birds form considerable flocks, often joining with other finches to search for seeds on the ground. The principal part of their food, however, consists of small berries and their seeds; the latter they crack with their powerful bills for the sake of the kernels. In spring the males sing delightfully, their notes being both powerful and mellow; for this reason they are frequently kept as cage-birds and even exported to Europe. The nest, usually built in September in Cape Colony, is a small and neat cup-shaped structure, and is nearly always placed in a low bush, rarely more than four feet above the ground. It is constructed outwardly of dry grass-stems and the smaller stalks of plants, and is lined with finer grass and cottony down. The eggs, generally four in number, are either white or white faintly tinged with blue; about one-half of them are unspotted, the remaining half have a few deep black spots, or one or two zig-zag markings towards the larger end. They are usually somewhat elongated and tapering towards the smaller extremity. They average  $0.85 \times 0.60$ .

Incubation lasts for fourteen days, and the young remain in the nest for from three to four weeks. During this period they are fed on insects and on the contents of the crops of the parent birds.

*Serinus flaviventris*

90. **Serinus flaviventris.** Yellow-bellied Seed-eater.

*Fringilla butyracea*, Linn. *Syst. Nat.* i, p. 321 (1766), *nec* *Loxia butyracea*, Linn.

*Crithagra flaviventris*, Swains. *Zool. Jour.* iii, p. 348 (1828); Layard, *B. S. Afr.* p. 220 (1867); Sharpe, ed. Layard's *B. S. Afr.* p. 485 (1884).

*Crithagra strigilata*, Swains. *An. in Menag.* p. 317 (1837); Layard, *B. S. Afr.* p. 219 (1867) = the female.

*Crithagra butyracea*, Blyth, *Cat. B. Mus. As. Soc.* p. 124 (1849); Layard *B. S. Afr.* p. 219 (1867); Sharpe, ed. Layard's *B. S. Afr.* pp. 487, 850 (1884).

*Serinus flaviventris*, Sharpe, *Cat. B. M.* xii, p. 353 (1887); Butler, *Foreign Finches*, p. 31 pl. ♂ and ♀ (1894); Shelley, *B. Afr.* i. p. 21 (1896).

St. Helena Seed-eater. "Kleine Seisje" of the Dutch.

766B S. f. - *mauritanica* *mauritanica* *mauritanica*  
766C S. f. - *mauritanica* *mauritanica* *mauritanica*

*Description. Adult male.*—Above, mantle and back yellowish-green narrowly streaked with black; rump unstreaked yellow; upper tail-coverts yellowish streaked with dusky; lesser wing-coverts greenish-yellow; rest of wing blackish-brown, the feathers edged with yellowish; tail-feathers blackish edged with yellow; forehead and a broad eyebrow and plumes round the eye golden-yellow; crown greenish-yellow spotted with dusky; lores dusky; ear-coverts greenish-yellow; sides of face and cheeks yellow; below, the entire under surface of body, together with the axillaries and under wing-coverts, golden-yellow.

Iris hazel; bill horn-colour, darker above; legs and feet dusky-brown.

Length 5·40; wing 2·80; tail 2·20; tarsus 0·70; culmen 0·40.

*Adult female.*—Above, mantle and back greenish broadly streaked with black; rump unstreaked greenish; upper tail-coverts dusky edged with greenish; wings dusky brown, the feathers edged with yellowish, the primaries and secondaries with whitish; tail-feathers dusky-brown with lighter edges; crown grey-green streaked with dusky; lores, eyebrow and feathers round eye whitish; ear-coverts brown; cheeks whitish; below, dull white, the breast tinged with greenish-yellow and streaked with dusky; the sides and flanks grey with dusky streaks; thighs brown; axillaries and under wing and tail-coverts washed with yellow; under surface of quills dusky with grey inner margins.

Iris brown; upper mandible dusky, the lower light brown; legs and feet dark brown.

Length 5·00; wing 2·65; tail 2·25; tarsus 0·65; culmen 0·40.

*Distribution.*—Common in Cape Colony, particularly in the western districts, ranging into the Orange Free State and the Southern Transvaal, where, according to Mr. Ayres, it is common and breeds at Potchefstroom.

Introduced into and now common at St. Helena.

*Habits.*—Although not such a favourite cage-bird as the “Cape Canarie,” the “Kleine Seisje” is by no means a despicable songster, many of its notes being exceedingly true and sweet. In the neighbourhood of Saldanha Bay, where it is, together with the larger *Serinus albigularis*, abundant among the bushes that overgrow the sandhills at the back of the beach, it breeds in September. A nest found on the 28th of this month, with five fresh eggs, was placed in the top of a low bush about fifteen inches off the ground. It was slightly but neatly constructed of small twigs and dry grass-



bents, and was thickly lined with the cottony seeds of a bush that grew not far off. The eggs are of a faint blue-green ground colour, sparsely zoned and marked at the large end with small spots of dark and light reddish-brown. They measure  $0.70 \times 0.52$ .

*Anomalospiza* *Yellow Cuckoo Finch*  
 775 91. **Serinus imberbis.** *Von der Decken's Seed-eater.*

*Crithagra imberbis*, *Cab. Journ. f. Orn.* 1868, p. 412.

*Crithagra chloropsis* (*nec. Bp.*) *Cab. in Von der Decken's Reis.* iii. p. 30, pl. ix (1869); *Gurney, in Andersson's B. Damara Land*, p. 183 (1872); *Sharpe, ed. Layard's B. S. Afr.* p. 486 (1884).

*Serinus imberbis*, *Sharpe, Cat. B. M.* xii, p. 355 (1888); *Shelley, B. Afr.* i, p. 21 (1896).

*Description. Adult male.*—Above, greenish-yellow, faintly streaked with dusky on the back and mantle; rump unstreaked greenish-yellow; upper tail-coverts yellow; lesser wing-coverts like the back; remaining coverts and quills blackish edged with yellow; tail-feathers dusky-brown edged with yellow; crown greenish-yellow with narrow dusky streaks; eyebrow, eyelids, a band from the eye across the front ear-coverts and cheeks yellow; posterior ear-coverts greenish-yellow; below, golden-yellow, tinged with green on the sides and flanks; axillaries and under tail-coverts bright yellow.

Iris hazel; bill dusky brown; legs and feet dusky brown.

Length 5.00; wing 2.80; tail 1.85; tarsus 0.65; culmen 0.45.

*Distribution.*—Great Namaqua, Damara Land and the Transvaal, ranging through Nyasaland and German East Africa to Zanzibar and Central Africa.

92. **Serinus rendalli.** *Rendall's Seed-eater.*

*Crithagra rendalli*, *Tristram, Ibis*, 1895, p. 129.

*Serinus rendalli*, *Shelley, B. Afr.* i, p. 22 (1896).

*Description. Adult male.*—Forehead and lores yellow; head and neck yellow narrowly streaked with brown; the scapulars, back and rump brownish-black, the feathers with yellow margins; the whole lower surface golden-yellow; wing and tail-feathers dusky with yellow margins; under wing-coverts pale yellowish.

Iris hazel; bill black; legs and feet dusky.

*Adult female.*—Above dusky, the feathers margined with white;

757 *Serinus Symonae* *Blackst. Oriolus*

lores and feathers round the eyes whitish ; below, pale yellow, with a few narrow streaks of dusky ; under wing-coverts whitish.

Iris hazel ; bill, legs and feet dusky.

Length 5·00 ; wing 2·75 ; tarsus 0·66. (*Ibis*, 1895, p. 130).

*Distribution*.—The two type specimens, described above, were obtained by Dr. Percy Rendall, F.Z.S., at Barberton in the Transvaal, on February 16, 1894.

### 93. *Serinus icterus*. *Eastern Yellow Seed-eater*.

*Fringilla ictera*, *Bonn. et Vieill. Enc. Méth.* iii, p. 972 (1823).

*Crithagra chrysopyga*, *Swains. B. W. Afr.* ii, p. 206, pl. 17 (1837) ;

*Layard, B. S. Afr.* p. 219 (1867) ; *Gurney, in Andersson's B. Damara Land*, p. 182 (1872).

*Serinus icterus*, *Bp. Consp.* i, p. 523 (1850) ; *Sharpe, Cat. B. M.* xii, p. 356 (1888) ; *Butler, Foreign Finches*, p. 34, pl. (1894) ; *Shelley, B. Afr.* i, p. 21 (1896).

*Crithagra hartlaubi*, *Bolle, Journ. f. Orn.* 1858, p. 355 : *Holub von Pelz. Beitr. Orn. Südafr.* p. 134 (1882).

*Crithagra ictera*, *Sharpe, ed. Layard's B. S. Afr.* pp. 485, 850 (1884).

*Description. Adult male*.—Above, greenish streaked with black merging into unstreaked yellow on the rump ; upper tail-coverts dusky edged with yellow ; least wing-coverts greenish-yellow ; remaining coverts and quills blackish edged with yellow ; tail-feathers black edged with yellow and tipped with grey ; crown like the back ; lores, feathers round eye and ear-coverts black ; forehead, eyebrow and cheeks yellow ; a malar streak of black ; below, yellow tinged with greenish on the sides and flanks ; axillaries and under wing-coverts ash-grey.

Iris brown ; bill horn-coloured ; legs and feet dusky-brown.

Length 4·40 ; wing 2·75 ; tail 1·75 ; tarsus 0·65 ; culmen 0·40.

*Adult female*.—Less bright than the male ; above browner ; the chin with a white spot.

*Young*.—Like the female, but the upper parts are browner with hardly a trace of yellow ; a streak of light brown through the eye ; the breast is more or less spotted with dusky brown, more so in young females.

*Distribution*.—Resident in Eastern Cape Colony, Natal, and the Orange Free State, extending northward through the Transvaal, Matabili and Mashonaland, and up the East Coast to Mombasa.

In West Africa from Damara Land to Senegambia. Introduced into Mauritius and Réunion.

*Habits.*—In both habits and appearance the present species closely resembles *Serinus flaviventris*. It is, however, smaller in size, paler in colour, and has a black streak across the lower face. In its habits it is lively and excitable, but at the same time, tame and confiding. In the spring of the year the cock is much given to chasing the hens, as well as intruding males of his own species, when not uttering his melodious song, of seven flute-like notes, from the top of a bush. During the winter months these Seed-eaters collect in small flocks and frequent open ground and stubble-fields in search of the small seeds which they habitually eat. They frequently feed along with other Finches and Waxbills. In summer they vary their diet with small beetles, caterpillars, and other insects, and I have even seen individual birds taking flies on the wing. They are fond, also, of sipping the nectar from the blossoms of certain creepers that are much frequented by Sunbirds. Owing to its pretty plumage, its gay and lively disposition, and its charming song, this species is frequently caught and caged, and is even exported to Europe as a cage-bird.

The nest, a neat and pretty cup-shaped structure, is built in a low bush, in September or October, of dry stalks of grass and flowers, lined with finer grass and cottony down. From three to five eggs are laid, of a pale bluish ground colour, sparingly spotted towards the larger end with pale reddish-brown.

They measure  $0.68 \times 0.52$ .

The female sits for twelve or thirteen days, and the young remain in the nest for about twenty-four days. They are fed on insects, and are at first covered with yellowish-white down.

*Crithagra* *albigularis*  
765 94. **Serinus albigularis.** *White-throated Seed-eater.*

*Crithagra albigularis*, *Smith, S. Afr. Quart. Journ.* ii, p. 48 (1833);

*Sharpe, ed. Layard's B. S. Afr.* p. 485 (1884).

*Crithagra selbyi*, *Smith, Rep. Exp. Centr. Afr.* p. 50 (1836); *Layard, B. S. Afr.* p. 219 (1867).

*Serinus albigularis*, *Sharpe, Cat. B. M.* xii, p. 360 (1887); *Shelley, B. Afr.* i, p. 21 (1896).

"Dik-bek Seisje" and "Berg Seisje" (Thick-beak Seed-eater and Mountain Seed-eater) of Dutch Colonists.

*Description.* *Adult male.*—Above, ash-brown streaked with darker brown merging into greenish-yellow on the rump and upper

765b. C. a. *Crithagra Damara*  
*white-throated*  
*Seed-eater*



tail-coverts ; lesser wing-coverts brown ; middle and greater coverts darker brown edged with pale brown ; quills dusky edged with whitish ; tail-feathers dark brown tinged with yellow and edged with grey ; crown like the back ; a slight eyebrow and fore cheeks white ; lores dusky ; sides of neck, ear-coverts and hind cheeks ash-brown ; below, pale ash-brown ; the throat, abdomen, and under tail-coverts white ; axillaries and under wing-coverts pale ash-brown, the lower tipped with white.

Iris brown ; bill horn-coloured ; legs and feet brown.

Length 6·30 ; wing 3·05 ; tail 2·35 ; tarsus 0·85 ; culmen 0·55.

*Adult female*.—Rather smaller and duller in colour.

*Young*.—Resembling the adult.



*Serinus albigularis*.

*Distribution*.—Confined to Cape Colony, where it is very generally distributed, especially in the western half of the colony. Very common on the coast at Saldanha Bay and on the Berg River. Rarer to the east of Port Elizabeth.

*Habits*.—This large but soberly coloured Seed-eater is very common to the north of Cape Town, especially towards Saldanha Bay, a locality in which Layard noticed its abundance in his time. Here it inhabits the bush-overgrown sand-dunes close to the beach, and feeds on the seeds of several of the more common weeds. In spring the cocks sing loudly and melodiously from the tops of the bushes, their song being, to my ear, superior to that of the Cape Canary. About the beginning of September they proceed to build their nests, open cup-shaped structures, in the bushes, frequently in a “milk-bush,” about four feet above the ground. These are rather loosely constructed of thin, pliable twigs and dry grass-stems, and are invariably lined with the white downy blossoms of a common weed. Towards the end of the month the females

lay three or four eggs of a very faint bluish-white, sometimes plain, more often sparingly marked at the large end with one or two spots or hair-like streaks of deep purplish-black. They average- $0.80 \times 0.60$ .

Both the male and female sit very closely on their eggs, and defend their nest valiantly against aggressors. On almost every occasion on which I have inspected a nest of this bird I have had my fingers pecked for my pains, and with their powerful bills they can inflict a severe bite. On one occasion I saw a pair of these Finches attack a large snake with great courage and success.

The young are fed on insects and macerated seeds from the crops of the old birds. They remain in the nest for a little more than a month.

**95. *Serinus crocopygius*. *Damara Yellow-rumped Seed-eater*.**

*Poliospiza crocopygius*, Sharpe, *Ibis*, 1871, p. 101; Gurney, in Andersson's *B. Damara Land*, p. 184 (1872); Sharpe, ed. *Layard's B. S. Afr.* p. 483 (1884).

*Serinus crocopygius*, Sharpe, *Cat. B. M.* xii, p. 360, pl. 8 (1888); Shelley, *B. Afr.* i, p. 22 (1896).

*Description. Adult male*.—Above, light brown streaked with darker brown; lower back, rump and upper tail-coverts yellow, the latter streaked with olive; lesser wing-coverts like the back; rest of wing and tail-feather dusky brown edged with paler brown, the greater coverts tipped with white; crown like the back; eye-brow, line below eye, line across cheeks, spot at base of under mandible and throat white; ear-coverts pale brown; breast, sides and flanks, light brown; rest of under surface white; axillaries and under wing-coverts yellowish-brown.

Iris brown; bill horn-brown; legs and feet slate-grey.

Length 6.00; wing 3.40; tail 2.30; tarsus 0.80; culmen 0.55.

*Adult female*.—Resembles the male but is smaller, and has the under wing-coverts white.

Length 6.00; wing 3.20; tail 2.30; tarsus 0.80; culmen 0.55.

*Distribution*.—Great Namaqua Land, Damara Land and Benguela.

*Habits*.—Andersson writes: "This species is sparingly met with in Damara and Great Namaqua Land; it is generally seen about rocks in the immediate neighbourhood of water, to which

it resorts in small flocks in the morning and evening to quench its thirst. Its food consists of seeds and berries."

758 96. *Serinus leucopterus*. <sup>a</sup> *White-winged Seed-eater*. *Brady's*

*Crithagra leucoptera*, Sharpe, *Ann. & Mag. Nat. Hist.* viii, p. 235 (1871).

*Serinus leucopterus*, Sharpe, *Cat. B. M.* xii, p. 361, pl. 9 (1888); Shelley, *B. Afr.* i, p. 22 (1896).

*Description* (From *Cat. Mus. Brit.*). *Adult*.—General colour above uniform brown with a slight olive-yellow tinge, the rump uniform with the back; lesser wing-coverts like the back; median and greater coverts dark brown, externally edged with the same colour as the back and tipped with white, forming a double wing-bar; bastard wing, primary coverts, and quills dark brown edged with olive; the inner secondaries whitey-brown at the ends of the inner web; upper tail-coverts like the back with small whitish tips; tail-feathers dark brown edged with dull olive-yellow; crown of head like the back, but broadly centred with dull blackish-brown; the forehead tinged with yellow, lores dull ashy; feathers round eye, ear-coverts and cheeks dusky brown, with a pale streak across the lower ear-coverts; throat white mottled with blackish spots on the chin and upper throat; remainder of under surface pale ashy-brown, lighter than the back and tinged with olive-yellow, with which some of the feathers are edged; sides of body and flanks like the breast; thighs dark brown; vent and under tail-coverts whitish, slightly tinged with yellow; under wing-coverts and axillaries like the breast; quills below dusky, ashy along the inner edge.

Length 6.00; wing 2.45; tail 2.25; tarsus 0.75; culmen 0.55.

*Distribution*.—The type specimen, described above, was forwarded from South Africa by Mr. E. L. Layard.

*Habits*.—Unknown.

759 97. *Serinus scotops*. <sup>Scotops</sup> *White Forest Canary*. *Sundevall's Seed-eater*.

*Crithagra scotops*, Sundev. *Öfv. K. Vet.-Akad. Förh. Stockh.* (1850), p. 98; Layard, *B. S. Afr.* p. 218 (1867); Sharpe, ed. Layard's *B. S. Afr.* pp. 487, 850 (1884).

*Serinus scotops*, Sharpe, *Cat. B. M.* xii, p. 362 (1888); Shelley, *B. Afr.* i, p. 22 (1896).

*Description*. *Adult male*.—Above, greenish-yellow streaked with black, the rump brighter and unstreaked; upper tail-coverts



greenish-yellow streaked with dusky; lesser wing-coverts yellowish-green; remaining coverts and quills dusky brown edged and tipped with yellow; tail-feathers dusky-brown edged with yellow; crown greenish-yellow narrowly streaked with black; forehead and lores blackish; eyebrow golden-yellow; ear-coverts and cheeks greenish-yellow; below, chin black; rest of under surface golden-yellow; the lower throat and thighs tinged with greenish, the sides and flanks streaked with dusky; axillaries and under wing-coverts yellow; under surface of quills dusky.

Iris brown; bill horn-colour; legs and feet dusky.

Length 5.00; wing 2.55; tail 1.95; tarsus 0.65; culmen 0.45.

*Adult female*.—Like the male, but the lores, feathers round the eye and chin are grey; the lower throat and breast greenish, streaked, like the sides and flanks, with dusky; rest of under surface yellow.

*Distribution*.—Cape Colony to the east of George, Natal, Zululand and the Transvaal; extending northward as far as Nyasaland, where it has been obtained by Mr. Whyte at Zomba.

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98. **Serinus angolensis.** *Black-throated Seed-eater.* <sup>Canary</sup>

*Fringilla angolensis*, Gm. *Syst. Nat.* i, p. 918 (1788); *Layard's B. S. Africa*, p. 203 (1867).

*Linaria atrigularis*, Smith, *Rep. Exp. Centr. Afr.* p. 49 (1836).

*Crithagra angolensis*, Bp. *Consp.* i, p. 520 (1850); Gurney, in *Anderson's B. Damara Land*, p. 182 (1872); Sharpe, ed. *Layard's B. S. Afr.* pp. 484, 850 (1884).

*Serinus angolensis*, Sharpe, *Cat. B. M.* xii, p. 367 (1888); Shelley, *B. Afr.* i, p. 22 (1896).

*Description. Adult male*.—Above, pale brown streaked with dusky, the feathers of mantle with greyish edges; rump bright yellow; upper tail-coverts dark brown with broad margins of pale brown edged and tipped with white; wing-coverts like the back, the greater edged with whitish towards their ends; quills dusky edged with yellow; tail-feathers dark brown tipped with white, which increases towards the outermost, which is one-third white; crown like the back; a narrow eyebrow white; lores grey; ear-coverts brown; cheeks white, crossed by a dark streak; chin white; throat black; rest of lower surface dull white, tinged with grey and narrowly streaked with black on the breast, sides and flanks; axillaries yellowish; under wing-coverts grey.

760 *S. mozambicus mozambicus*  
yellow eye Canary

Iris brown ; bill brownish ; legs and feet flesh-coloured.

Length 4·65 ; wing 2·75 ; tail 1·80 ; tarsus 0·52 ; culmen 0·40.

*Adult female*.—A little smaller than the male and with less black on the throat.

*Distribution*.—Tolerably common on the Orange River according to Dr. Bradshaw, thence to the Zambesi River, ranging as far north as Masai Land in East Africa. On the west coast from Damara Land to the Congo River.

### Genus V. **ALARIO.**

*Type.*

**Alario**, *Bp. Conspect.* i, p. 519 (1850) ..... *A. alario*.

Bill rather short and stout, not half the length of head, both culmen and gonys slightly curved, and both mandibles about equally deep. Wings short, falling short of the end of tail by more than the length of the tarsus. Plumage of back, upper wing and tail-coverts and tail, chestnut-red in the male, browner and duller in the female.

This genus contains a single species the range of which is confined to South Africa.



*Alario alario.*

### 99. **Alario alario.** *Mountain Canary.*

*Fringilla alario*, *Linn. Syst. Nat.* i, p. 319 (1766).

*Alario alario*, *Bp. Conspect.* i, p. 519 (1850) ; *Sharpe, ed. Layard's B. S.*

*Afr.* p. 477 (1884) ; *id. Cat. B. M.* xii, p. 346 (1887) ; *Butler, Foreign*

*Finches*, p. 41, pl. ♂ and ♀ (1894) ; *Shelley, B. Afr.* i, p. 21 (1896).

*Amadina alario*, *Layard, B. S. Afr.* p. 200 (1867).

*Alario aurantia*, *Gurney, in Andersson's B. Damara Land*, p. 175 (1872).

“Berg-Canarie” and “Namaqua Canarie” of the Dutch.

*Description. Adult male*.—Above, back and rump, also the wing-coverts, chestnut-red ; rest of wing black, the secondaries edged with chestnut ; upper tail-coverts and tail-feathers chestnut ; sides of neck white ; head, throat and centre of breast black ; rest

of under surface white tinged with buff; axillaries and under wing-coverts chestnut; edge of wing black; under surface of quills black.

Iris brown; bill grey-brown, the upper mandible darker; legs and feet slate-grey.

Length 4.60; wing 2.50; tail 1.85; tarsus 0.55; culmen 0.35.

*Adult female*.—Above, chestnut-brown streaked with dusky; rump and upper tail-coverts paler chestnut, lesser and middle wing-coverts pale chestnut; rest of wing dusky-brown, the inner secondaries edged with rufous; tail-feathers chestnut with a central streak of black towards their ends, most marked on the central feathers; crown grey streaked with dusky; lores, eyebrow and spot below eye white; sides of face and ear-coverts grey, a white spot in the centre of the ear-coverts; below white, tinged with brown on the breast, sides, flanks, thighs and under tail-coverts; axillaries and under wing-coverts pale rufous; edge of wing black; under surface of quills dusky.

Length 4.60; wing 2.60; tail 1.95.

*Young*.—Resemble the female, but are somewhat more tawny in colour, the upper surface streaked, the throat, breast and sides spotted with dusky.

*Distribution*.—Cape Colony and Great Namaqua Land; rather local in its distribution, but found in small flocks near Cape Town, Malmesbury, Knysna, Port Elizabeth, and elsewhere in the Colony being perhaps most abundant in the Karroo. In Great Namaqua Land Andersson met with this bird in small flocks.

*Habits*.—These pretty little Finches are of gentle and confiding habits and when feeding allow a very close approach without showing any symptoms of alarm. They are fond of perching on low bushes, but obtain the greater part of their food, consisting of grass and other small seeds, from the ground, where they often intermingle with the flocks of Waxbills and other small Weaver Finches. The males frequently utter their low but sweet song from the top of a bush, chiefly in the spring, but according to Dr. Russ it is, in caged birds, continued the whole year. He describes it as being soft, flute-like but low-pitched. In Great Namaqua Land Andersson found the Mountain Canary always in the neighbourhood of water. Rickard remarks: "I fancy this is the species much prized by the lads in Port Elizabeth, who called it the 'Namaqua'; it only appears at long intervals, but in considerable numbers when it does occur; it sings well and becomes very tame."



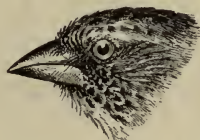
In confinement this species breeds both with the Cape and the Common Canary. In a wild state it builds a small and neatly constructed cup-shaped nest in a low bush, of dry grass and small stalks, lined with finer grass and the down of plants. The eggs, three to five in number, are pale bluish-green, spotted at the large end with several shades of reddish-brown. They average  $0.68 \times 0.50$ . The young are hatched in eleven days, and remain in the nest for about three weeks. They are fed on partly digested food from the crops of the old birds for some time after they leave the nest. Two broods are reared in the season, the first laying being in November, the second in January.

#### Genus VI. **CHRY SOMITRIS.**

*Type.*

**Chrysomitris**, *Boie, Isis*, 1828, p. 322 .....C. spinus.

Bill rather attenuated, tapering to an acute point, the culmen and sides nearly straight. Nostrils concealed by short stiff feathers directed forwards. Wings rather long and pointed, the second quill being slightly the longest. Tail rather short and slightly forked. Tarsus slender; claws curved and acute. Plumage soft, the predominant tints chocolate-brown above, olive-yellow below; the female of duller hue and more spotted on the lower surface.



*Chrysomitris totta.*

This genus contains the Siskins, some twenty-seven species in all. They range over Europe, Asia, North and South America, and East and South Africa; three species are found in North-east and East Africa, one only in South Africa. They are all birds of small size, with a pretty and varied but not loud song; they feed on small seeds and insects, the young on insects exclusively. They build small and neatly constructed open nests and lay four or five white or bluish-white eggs, those of the majority of the species being more or less spotted with brown.

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*Sparvus* *us* *Cape*

100. **Chrysomitris totta.** *South African Siskin.*

*Loxia totta*, *Sparrm. Mus. Carls.* i, pl. 18 (1786).

*Fringilla totta*, *Layard, B. S. Afr.* p. 202 (1867).

*Chrysomitris totta*, *Salvin. Cat. Strickl. Coll.* p. 214 (1882); *Sharpe, Cat. B. M.* xii, p. 231 (1888); *Shelley, B. Afr.* i, p. 19 (1896).

*Serinus tottus*, *Sharpe, ed. Layard's B. S. Afr.* p. 488 (1884).

"Pietje Canarie" of the Dutch; "Brown Canary" of the English.

*Description.* *Adult male.*—Above, chocolate-brown, the back slightly mottled with darker brown; rump olive-yellow; upper tail-coverts brown edged with dull white; tail-feathers black tipped with white; wing-coverts uniform chocolate-brown: quills black externally, brown internally, tipped with white and with a sub-terminal mark of black; crown olive-yellow, the feathers with dusky centres; a slight eyebrow olive-yellow; lores grey; sides of face and ear-coverts grey tinged with olive; cheeks olive-yellow streaked with brown; below olive-yellow tinged with brown on the sides, flanks and thighs, the throat with a few dusky spots, sometimes absent; axillaries and under wing-coverts greyish-yellow.

Iris brown; bill pale brown; legs and feet brown.

Length 5.00; wing 2.80; tail 2.00; tarsus 0.60; culmen 0.40.

*Adult female.*—Generally of a browner tone, with less yellow in the plumage; crown like the back; throat and upper breast grey-brown tinged with yellow and spotted with dusky.

*Young.*—Resemble the female.

*Distribution.*—Confined to Cape Colony and most abundant in the south-western districts, especially near Ceres, Tulbagh, Swellendam and Knysna; very common at East London according to Mr. Rickard.

*Habits.*—Although by Dr. Sharpe separated from the Canaries (*Serinus*), and placed with the Siskins, (*Chrysomitris*), this little bird resembles the former in its habits, and when kept in confinement readily interbreeds with the Cape Canary (*S. canicollis*.) The song, although of a certain merit, does not equal that of the Cape Canary in tone or quality.

It is of somewhat local distribution, abundant in certain localities and quite absent from others apparently equally well adapted to its habits. It may be often met with on bush-covered hillsides and appears to prefer hilly to more level ground. It feeds on small seeds, buds of trees and insects. The nest is placed in a bush from two to four feet above the ground and is built of grass-stems, small

rootlets and pliant twigs, lined with down and occasionally a few hairs. The eggs are four or five in number, pale bluish-green sparingly spotted and sometimes zoned with reddish-brown of two shades. They average  $0.72 \times 0.54$ .

## Subfamily II. EMBERIZINÆ.

In the Buntings the bill is acutely conical, with the edges of the upper mandible sinuated, a bony knob on the palate which fits into a concavity of the lower mandible; the edges of the two mandibles not in contact throughout, a gap being left about midway between the gape and the tip of the bill; the upper mandible is also generally smaller and narrower than the lower; the culmen is nearly straight.

The *Emberizinae* moult in autumn and become brighter in spring owing to the worn tips of the feathers falling off. The males are usually brighter than the females. The young resemble the latter very closely until after their first moult, when the males gradually assume their adult plumage. Like the *Fringillinae*, they feed on seeds and insects.

The Buntings range over Europe, Asia, Africa, and North and South America, but are not found in Australasia. Fourteen species are distributed over the Ethiopian Region and five occur in South Africa.

### *Key to the Genera.*

- a. Three or four outer tail-feathers with broad tips  
or patches of white ..... *Emberiza*, p. 183.
- b. Outer tail-feathers without white tips or markings  
excepting the outer edge of the outermost ..... *Fringillaria*, p. 187.

## Genus I. EMBERIZA.

*Type.*

**Emberiza**, *Brisson, Orn.* iii, p. 257 (1760).....*E. citrinella*.

Bill hard, conical and short; the upper mandible not wider than the lower, the edges of both inflected, and those of the latter sinuated; the palate with a projecting bony knob. Nostrils oval, basal and situated near the culmen, partly hidden by small feathers. Gape angular. Wings moderate; the first primary attenuated and



very small, the second, third, and fourth nearly equal. Tail rather long and slightly forked. Tarsus scutellated anteriorly, each side covered by an undivided plate which forms a sharp ridge behind, about as long as the middle toe; claws considerably curved, that of the hind toe moderately long. Plumage very variable, sometimes rather gaudy. The male generally considerably brighter than the female. One complete moult in the year, in autumn; some of the species with a partial spring moult as well, but all lose the tips of the worn feathers in spring, and with this change their colour to a certain extent. About thirty-six species of typical Buntings are known, distributed over Europe, Asia, and Africa. Two species only occur in South Africa, but at least eight others are found in Africa to the north of the Zambesi River. Buntings usually frequent fairly open country, some, however, are confined to marshy spots, others to rocky ground and mountain sides. They feed on the ground as a rule, on seeds and insects. The majority have peculiarly monotonous, drawling notes, which they utter from some elevated station, such as the top of a bush or rock. Their nests are built on the ground, in bushes, or among reeds. Their eggs are usually to be recognised by the peculiar zig-zag scrawls with which they are covered.

*Key to the Species.*

- a. Crown black, with a central streak of white *E. flaviventris*, p. 184.  
 b. Crown rufous-brown streaked with black  
 and centred with a white streak ..... *E. major orientalis*, p. 186.

*Res. teachers of school*

773 101. ***Emberiza flaviventris*.** *Golden-breasted Bunting.*

*Passerina flaviventris*, Vieill. *Enc. Méth.* ii, p. 929 (1823).

*Fringillaria flaviventris*, Layard, *B. S. Afr.* p. 206 (1867); Gurney in Andersson's *B. Damara Land*, p. 188 (1872); Sharpe, ed. Layard's *B. S. Afr.* pp. 491, 851 (1884).

*Emberiza flaviventris*, Sharpe, *Cat. B. M.* xii, p. 499 (1888); Shelley, *B. Afr.* i, p. 18 (1896).

"Strep-kopje" (Stripe-head) of the Dutch.

*Description.* *Adult male in summer.*—Above, crown black with a white streak down the centre; lores and eyebrow white; a streak through the eye and upper ear-coverts black; a broad streak below the eye and across lower ear-coverts white; cheeks black; nape

chestnut tinged with grey; back and scapulars chestnut-red; lower back, rump and upper tail-coverts ash-grey, the latter with white edges; lesser wing-coverts ash-grey, the middle white with black bases, the greater black with white tips are grey edges; quills black edged with white, the inner secondaries with chestnut; tail-feathers black with grey margins, the outer four tipped with white, the outer web of the outermost white with a black spot; a patch on sides of neck and chin white; rest of under surface yellow, the chest tinged with orange, the sides and thighs grey, the flanks and under tail and wing-coverts, as well as the axillaries and inner margin of quills, white.

Iris brown: upper mandible black, the lower brown; feet dusky flesh-colour.



*Emberiza flaviventris.*

Length 6·50; wing 3·20; tail 2·90; tarsus 0·70; culmen 0·50.

*Adult male in winter.*—The feathers of the back edged with fulvous, the streaks on the head and face duller; the sides of body browner than in summer.

*Adult female.*—Above, a deeper chestnut than the male, the upper back and scapulars streaked with black.

*Young.*—Like the female, but with broader streaks above; below duller in colour; the light face-streaks buff instead of white.

*Distribution.*—From Eastern Cape Colony through Natal, Zululand and the Orange Free State into the Transvaal, thence westward to Damara Land and Benguela, northward to Nyasaland and German East Africa. In North-east Africa and Abyssinia a race which is smaller, with slightly different markings, occurs, whilst a larger form inhabits Uganda and the Victoria Nyanza Country.

*Habits.*—These handsomely marked little Buntings are usually met with during autumn and winter in small flocks of ten or a dozen. They are extremely tame and fearless in their habits, like all the South African Buntings I have met with, feed much on the ground in open bush country, but are sometimes found in thickly

wooded localities, and if disturbed only fly for a few yards before settling again on the ground. Only occasionally do they perch on low bushes or trees, much oftener on stones or rocks. They feed largely upon insects, especially upon small beetles, less frequently upon seeds. In spring the brilliant cocks sing their simple Bunting-like notes from the summit of low bushes or stones, a monotonous and oft-repeated "zizi-zizi-zee," with the stress on the last syllable. About the middle of October the female proceeds to build her nest of dry grass-stalks, lined with finer grass and hair, in a low bush at the foot of a rock, or among the roots of herbage on a ledge, and towards the beginning of November lays four or five eggs.

These are smaller than those of the Cape Bunting (*Fringillaria capensis*), and differ completely in colour. They are white, thickly marked all over with scrawls and hair-like zig-zag lines of very dark purplish-brown or black. They measure  $0.75 \times 0.58$ .

774 102. **Emberiza major orientalis.** *Great Yellow Shelley's Bunting.*

*Fringillaria orientalis*, Shelley, *Proc. Zool. Soc.* 1882, p. 308.

*Emberiza orientalis*, Sharpe, *Cat. B. M.* xii, p. 502 (1888); Shelley, *B. Afr.* i, p. 18 (1896).

*Description. Adult male.*—Above, the feathers rufous-brown centred with black; the feathers of the back margined with pale brown; rump and upper tail-coverts dark grey; lesser wing-coverts black with grey margins; middle coverts white; greater coverts black tipped with white and edged with brown; quills dusky edged with whitish; tail-feathers brown, the outer three with a white patch on the inner web increasing in size towards the outermost; crown rufous-brown streaked with black, a white streak down the centre; eyebrow, hind ear-coverts, and streak behind them white; lores, feathers about eye, anterior ear-coverts, and cheeks black; chin and line below cheeks white; sides of neck and breast, also the flanks, grey; throat and centre of body yellow; thighs, vent and under tail and wing-coverts white.

Iris brown; upper mandible dusky; the lower reddish; legs and feet dusky flesh-colour.

Length 5.80; wing 3.20; tail 3.00; tarsus 0.80; culmen 0.55.

*Distribution.*—Momboio in East Africa, Nyasaland, the Upper Congo districts and Mashonaland.

*Habits.*—This race only differs from *Emberiza major* (Cabanis), of Angola, in being smaller and in having the eyebrow and central crown-streak broader and more distinct. The bill and tarsus are a trifle longer also.



Genus II. **FRINGILLARIA.**

Type.

**Fringillaria**, Swains. *Class. B.* ii, p. 289 (1837) ..... *F. capensis*.

Bill with the upper mandible entire, elongated and pointed. Wings short; the primary quills not much longer than the tertials. Tail moderate, either quite even or very slightly rounded. Lateral toes small, equal. All the claws small and short. Plumage rather variable, but never any white pattern on the tail, according to Dr. Sharpe.

Seven species belonging to this genus are known, distributed over Africa, Arabia and Palestine, Baluchistan and Northern India as well as Japan.

In their general habits and food, as well as in their song, the *Fringillaria* resemble the *Emberizæ*; but their eggs are very different, being spotted and blotched with brown, like those of some Finches and Larks, and being without the peculiar zig-zag markings so characteristic of the eggs of the majority of the true Buntings (*Emberizæ*). Three species of the genus *Fringillaria* are found in South Africa; a fourth, *F. septemstriata*, occurs in North-east Africa, and a fifth, *F. insularis*, on the island of Socotra.

## Key to the Species.

- a. Crown grey-brown with a central streak of grey; throat white; lesser and middle wing-coverts chestnut-red ..... *F. capensis*, p. 187.
- b. Crown black with a central streak of white; throat black ♂; throat ashy ♀; lesser wing-coverts reddish-brown mottled with black, middle and greater coverts black ..... *F. tahapisi*, p. 189.
- c. Crown brown, each feather streaked black; throat whitish; lesser and middle wing-coverts rufous-brown centred with black ..... *F. impetuani*, p. 190.

*Capensis*103. **Fringillaria capensis.** Cape Bunting.

*Emberiza capensis*, Linn. *Syst. Nat.* i, p. 310 (1766).

*Fringillaria vittata*, Swains. *An. in Menag.* p. 315 (1837); *id. Classif. B.* ii, p. 290 (1837); Layard, *B. S. Afr.* p. 207 (1867).

*Fringillaria capensis*, Swains. *Classif. B.* ii, p. 290 (1837); Layard, *B. S. Afr.* p. 206 (1867); Holub and Pelzeln, *Beitr. Orn. Südaf.* p. 135 (1882); Sharpe, ed. Layard's *B. S. Afr.* pp. 489, 851 (1884); *id. Cat. B. M.* xii, p. 565 (1888); Shelley, *B. Afr.* i, p. 18 (1896).

"Streepkopje" and "Streepkop Mossie" (Stripe-head and Stripe-headed Sparrow), of the Dutch Colonists.

772 B L c - media Karroo Bunting  
 771 C L - c - media Karroo Bunting  
 771 B L - c - Limpopoensis Swaals  
 771 C L - c - Brasfieldi sub sp. nov.

*Description.* *Adult male.*—Above, brown streaked with black, the rump and upper tail-coverts unstreaked brown; least wing-coverts chestnut-red; middle coverts chestnut streaked with black; greater coverts black edged with chestnut; primary coverts and quills black, the primaries edged with whitish, the secondaries with chestnut; tail-feathers black edged with grey, the outermost with dull white externally; crown grey-brown with a central streak of grey; a long and distinct eyebrow white; below this a black streak followed by a white streak and this by another black streak across the cheek which joins the black eye-streak behind the ear-coverts; below white, tinged with grey on the lower throat, breast and sides; the flanks streaked with dusky; thighs brown; axillaries and under wing-coverts yellowish; under surface of quills dusky.



*Fringillaria capensis.*

Iris brown; upper mandible dusky-brown, the lower paler; legs and feet brown.

Length 6·00; wing 3·40; tail 2·50; tarsus 0·80; culmen 0·60.

*Adult female.*—Resembles the male, but the white face-streaks are less conspicuous.

*Young.*—Are duller in colour generally; the breast and flanks are streaked with dusky.

*Distribution.*—Cape Colony: common nearly everywhere in open stony localities, from the sea level up to 5,000 feet. The higher part of Natal, but not on the coast; the Orange Free State; West Griqualand; the Southern Transvaal and Great Namaqua Land. Not uncommon near Newcastle, Natal, in July and October (Butler, Feilden and Reid): “on rocky ranges near Potchefstroom” (Ayres).

*Habits.*—The Cape Bunting is almost invariably met with in pairs on broken rocky ground, and in Western Cape Colony is a common species from the sea level to about 5,000 feet in the mountains.

Even on the barren sandy coast of Little Namaqua Land it is to be found wherever there is the slightest outcrop of rock. The "Streep-Kopje" is an extremely tame little bird and allows a very close approach as it sits, piping its simple song of "zizi-zizi-zi" and opening and shutting its wings, on the top of a rock. It feeds on insects, small beetles, grasshoppers and spiders, as well as on the seeds of various grasses and weeds. The nest, rather deeply cup-shaped, is flimsily constructed of dry grass and rootlets, scantily lined with hair, and is usually placed in a low bush close to the ground or by the side of a rock. The three or four eggs, laid in September or October in the Colony, are pale greenish-white, thickly spotted and blotched with reddish-brown and yellow, frequently in a cap over the larger end. They average  $0.80 \times 0.62$ .

771  
104. **Fringillaria tahapisi.** *Rock Bunting.*

*Emberiza tahapisi*, *Smith, Rep. Exp. Centr. Afr. App.* p. 48 (1836).

*Fringillaria tahapisi*, *Gray, Gen. B.* ii, p. 378 (1844); *Layard, B. S. Afr.* p. 207 (1867); *Sharpe, ed. Layard's B. S. Afr.* pp. 490, 851 (1884); *id. Cat. B. M.* xii, p. 558 (1888); *Shelley, B. Afr.* i, p. 18 (1896).

*Description. Adult male in summer.*—Above, reddish-brown mottled with black; lesser wing-coverts like the back; middle and greater coverts black edged with reddish-buff; primary coverts and quills dusky-brown edged with rufous; tail-feathers dusky-brown edged with pale reddish-brown; crown black with a white streak down the centre; eyebrow white; below this a black followed by a white streak; cheeks black; malar streak white; throat black; rest of under surface pale reddish-brown; axillaries and under wing-coverts reddish-brown; under surface of quills dusky, their inner margins reddish-brown.

Iris brown; upper mandible brown, the lower paler; feet brown.

Length 5.25; wing 3.05; tail 2.35; tarsus 0.75; culmen 0.35.

*Adult male in winter.*—The plumage is less bright and the face-stripes less distinct; the black feathers of the throat are edged with white.

*Adult female.*—The crown is like the back; the head and face markings are less distinct than in the male; the feathers of the throat have black bases and grey tips.



Length 5.00; wing 2.95; tail 2.35.

*Distribution*.—Eastern Cape Colony, Natal, Zululand and the Orange Free State; throughout the greater part of the Transvaal, Rhodesia and Bechuanaland, ranging northward into Nyasaland and the Victoria Nyanza districts, and extending into Equatorial Africa. On the West coast it has been obtained in Benguela and Gaboon.

*Habits*.—I have generally met with this Bunting on broken hill-sides strewn with rocks and partly overgrown with low bushes. Like *F. capensis*, it is of tame and familiar habits and is fond of uttering its broken song from the summit of a stone or low bush while at intervals it opens and shuts its wings. Its notes resemble those of the Cape Bunting to a certain degree, but are at the same time easily distinguished by the ear although the difference is not readily pointed out in words. It feeds on small seeds and various insects.

A nest taken in Upper Natal in November was built a few inches off the ground, in a low bush sheltered on one side by a rock. The three eggs resemble those of *F. capensis* in colour but are a trifle smaller than the average of the latter.

770 105. *Fringillaria impetuani*.<sup>a</sup> *Lark Bunting*.

*Emberiza impetuani*, *Smith, Rep. Exp. Centr. Afr. App.* p. 48 (1836).  
*Fringillaria impetuani*, *Gray, Gen. B.* ii, p. 378 (1844); *Layard, B. S. Afr.* p. 206 (1867); *Gurney in Andersson's B. Damara Land* p. 189 (1872); *Sharpe, ed. Layard's B. S. Afr.* pp. 489, 851 (1884); *id. Cat. B. M.* xii, p. 563 (1888); *Shelley, B. Afr.* i, p. 18 (1896).

*Description. Adult male*.—Above, brown streaked with black; the mantle reddish-brown; lesser and middle wing-coverts rufous-brown; greater coverts black edged with rufous; primary coverts and quills blackish edged with pale rufous; the secondaries externally rufous; tail-feathers blackish edged with brown, the outermost externally with white; crown like the back; lores, eyebrow and eyelid brownish-white; ear-coverts rufous; sides of neck brown streaked with black; below whitish, the breast and sides tinged with rufous, the flanks streaked with brown; axillaries and under wing-coverts reddish-brown; under surface of quills dusky with rufous inner margins.

Iris dark brown; upper mandible dusky, the lower horn-colour; legs and feet dusky flesh-colour.

Length 5.45; wing 3.00; tail 2.25; tarsus 0.70; culmen 0.40.

*Adult female*.—Similar to the male in colour but slightly smaller.

The summer and winter plumages are nearly alike, in the former the birds are somewhat browner, in the latter greyer.

*Young*.—Resemble the female very closely in colour.

*Distribution*.—Somewhat locally distributed in Cape Colony but generally common where found, as in the Karroo and on the Orange River. It is more abundant towards the north and north-east districts of the Colony. To the north it ranges across the Orange River into Bechuana, Great Namaqua and Damara Lands; to the east into the Orange Free State, Natal and the Transvaal.

*Habits*.—Mr. Layard describes this species as, "Common about Nel's Poort, flying in small flocks and feeding on small grass seeds and insects. It has a short lively song. Its nest is cup-shaped, constructed in a low bush. Eggs white spotted in a ring with obscure ill-defined cloudy blotches and pin-point dots of purplish brown. Axis 7"; diameter  $5\frac{1}{2}$ ""."

The eggs described by Mr. Layard as of this bird appear to be those of some other species, as a clutch from a nest in the Karroo on which I snared the hen do not at all resemble his description either as regards size or colour. They are pale bluish-white rather heavily clouded and spotted with brownish-yellow and red and measure  $0.72 \times 0.60$ . The cup-shaped nest was built of dry grass in a hollow at the foot of a bush. The resemblance of this Bunting to a Lark is not only in colour, it extends to some of its habits, for it runs and crouches on the ground just like one of the latter birds.

Andersson writes: "This species is common in Damara and Great Namaqua Land; but as it frequently resorts to the ground in search of seeds and insects, it often thus escapes observation; it is gregarious, and is partial to broken ground or its immediate vicinity, and also to the neighbourhood of water, which it appears to require pretty constantly."

## Family VI. ALAUDIDÆ.

Bill extremely variable, slender and warbler-like in *Lullula*; long, slender and curved in *Certhilauda*; short, deep and finch-like in *Pyrhulauda*; extraordinarily stout in *Rhamphocorys*, with many intermediate forms. Nostrils open, as in *Mirafra*, or concealed by a tuft of bristly feathers directed forwards, as in *Calendula*.

Wing with the outer primary fairly well developed, as in *Mirafra*, or quite abortive, as in *Tephrocorys*; the secondaries sometimes short, in some species reaching the wing-tip. Tarsi rounded behind and scutellated both anteriorly and posteriorly, the plates nearly corresponding in number. Hind claw very variable, in some species long and nearly straight, in others short and curved. Plumage never brilliant, sometimes chiefly black, but usually of some shade of brown, earth-brown, reddish-brown, or sandy-brown, more or less streaked with darker brown, and showing a tendency to vary in shade with the colour of the soil in localities in which the individual is resident. Crown crested, semi-crested, or showing a tendency towards cresting in elongated semi-erectile plumes. Sexes alike in plumage. Nestlings more spotted. One complete moult in the year, in autumn, but the margins of the feathers are usually shed in spring, giving rise to a considerable change in colour.

The Larks are sharply differentiated from all other South African Passerine Birds, excepting *Nilaus*, by the rounding and scutellation of the posterior aspect of the tarsus. Were it not for this distinguishing feature some Larks could scarcely, so far as plumage goes, be distinguished from some Pipits (*Anthinæ*), birds of very similar habits as well as of appearance.

In the Catalogue of Birds in the British Museum, Dr. Sharpe recognises seventy-four species and forty-two subspecies of Larks. A single species of *Mirafra* occurs in Australia and several species of *Otocorys* in America; the remaining species and subspecies are distributed over Europe, Asia and Africa, no less than twenty-nine being found in South Africa, the majority of which are peculiar to that sub-region.

Dr. Bowdler Sharpe has made a careful study of the South African Larks (*P. Z. S.*, 1874, p. 614, pls. lxxv, lxxvi, and *Cat. B. M.*, vol. xiii), and in the following key to the genera I follow his arrangement, but in reversed order.

#### *Key to the Genera.*

- a. Bill rather short and stout, the culmen shorter than the middle toe and claw.
  - a<sup>1</sup>. Without elongated feathers on the sides of head.
  - a<sup>2</sup>. First primary well developed, as long as the inner toe and claw.



- a*<sup>3</sup>. Nostrils concealed by a tuft of plumes.  
*a*<sup>4</sup>. Without a crest.  
*a*<sup>5</sup>. Hind-claw curved and short, about equal to hind-toe ..... *Pyrrhulauda*, p. 193.  
*b*<sup>5</sup>. Hind-claw curved, shorter than hind-toe ; plumage above uniform ..... *Ammomanes*, p. 197.  
*c*<sup>5</sup>. Hind-claw long and pointed, as long as hind-toe ; plumage above mottled ..... *Calendula*, p. 201.  
*b*<sup>4</sup>. With a crest ..... *Galerita*, p. 203.  
*b*<sup>3</sup>. Nostrils open and exposed ..... *Mirafra*, p. 204.  
*b*<sup>2</sup>. First primary rudimentary.  
*c*<sup>3</sup>. Bill at nostrils higher than broad ..... *Spizocorys*, p. 219.  
*d*<sup>3</sup>. Bill at nostrils as high as broad ..... *Tephrocorys*, p. 221.  
*b*<sup>1</sup>. With elongated feathers springing from sides of head ..... *Otocorys*, p. 225.  
*b*. Bill elongated and curved, the culmen equal to or exceeding the middle toe and claw in length.  
*c*<sup>1</sup>. Hind-claw much curved, shorter than its toe ..... *Heterocorys*, p. 226.  
*d*<sup>1</sup>. Hind-claw slightly curved, about equal to its toe ..... *Alæmon*, p. 228.  
*e*<sup>1</sup>. Hind-toe long and straight ..... *Certhilauda*, p. 232.

Genus I. **PYRRHULAUDA.***Type.***Pyrrhulauda**, *Smith, Ill. Zool. S. Afr.* pl. vi. (1839) ...*P. australis*.

Bill short, higher than broad at nostrils, the culmen arched, the sides much compressed, the tip entire, the lateral margins sinuated. Nostrils basal and concealed by the frontal plumes. Wings long, the first quill spurious, the second shorter than the third or fourth, which are nearly equal and longest. Tail moderate and slightly emarginated. Tarsi moderate, longer than the middle toe, and slender. Toes very small, the lateral toes equal and strongly scutellated above; the claws short, slightly curved; the hind claw curved and short, about equal to the hind toe in length. The sexes differ in plumage, the males having the under surface black, the females buff.

The Genus *Pyrrhulauda* contains six species and subspecies, of which four are confined to Africa, one is found in North-East Africa, Arabia and India, while the sixth is confined to India and Ceylon. Larks of this genus are usually found feeding on the ground in flocks. If disturbed they fly off together. They feed on seeds and insects, and build in some slight hollow of the ground under

shelter of a low bush or grass tuft. Their eggs, two to four in number, are white, much spotted and freckled with pale brown; their note a shrill but not loud chirp.

*Key to the Species.*

- a. Ear-coverts black ..... *P. australis*, p. 194  
 b. Ear-coverts white.  
   a'. Upper surface ash-grey ..... *P. verticalis*, p. 195  
   b'. Upper surface chestnut ..... *P. smithi*, p. 196



*Pyrrhulauda australis.*

744 106. *Pyrrhulauda australis.* *Dark-naped Lark.*

*Megalotis australis*, *Smith, Rep. Exp. Centr. Afr.* 1836, p. 49.

*Pyrrhulauda australis*, *Smith, Ill. Zool. S. Afr.* pl. 24 (1839); *Layard, B. S. Afr.* p. 210 (1867); *Gurney in Andersson's B. Damara Land*, p. 191 (1872); *Sharpe, ed. Layard's B. S. Afr.* p. 493 (1884); *id. Cat. B. M.* xiii, p. 651 (1890); *Shelley, B. Afr.* i, p. 17 (1896).

*Description.* *Adult male.*—Above, reddish-brown, the bases of the feathers black; wing-coverts and quills black edged with reddish-brown; upper tail-coverts and tail-feathers, (excepting the two central which are brown), black; entire head and under surface black.

Iris hazel; bill horn-brown; legs and feet flesh-coloured.

Length 4·80; wing 3·10; tail 1·70; tarsus 0·60; culmen 0·40.

*Adult female.*—Above dusky brown, the feathers of the head and neck edged with buff; upper tail-coverts buff streaked with black;

wings and tail black; centre of breast and abdomen black; rest of under surface buff, the sides streaked with black.

Length 4·50; wing 3·00; tail 1·70.

*Distribution*.—Northern and Eastern Cape Colony; common in the valley of the Orange River and near Colesberg, Beaufort West and King William's Town. Natal and the Orange Free State, ranging into the Transvaal and across Bechuanaland to Damara Land.

*Habits*.—Similar to those of *P. verticalis*. Mr. T. Ayres met with this species, when breeding, in the Transvaal. He writes as follows: "I found two nests of this bird, one in March the other in April; each nest contained only two eggs which, in one instance, were somewhat incubated. One of these nests I found at Mamusa, on the Hartz River, the other near Bloemhoff, on a tributary of the Vaal River. The nest of this species is placed on the ground under shelter of a clump of weed or grass. It is roughly constructed of coarse grass, slightly lined with fine roots; both the nests which I found were situated within twenty yards of water. The egg is white, much spotted with light sepia-brown."

745 *Tremopteryx* 745  
107. ***Pyrrhulauda verticalis***. Grey-backed Lark.

*Megalotis verticalis*, Smith, *Rep. Exp. Centr. Afr.* p. 48 (1836).

*Pyrrhulauda verticalis*, Smith, *Ill. Zool., S. Afr. Aves*, pl. 25 (1839); Layard, *B. S. Afr.* p. 210 (1867); Gurney, in Andersson's *B. Damara Land*, p. 190 (1872); Sharpe, ed. *Layard's B. S. Afr.* p. 492 (1884); *id.* *Cat. B. M.* xiii, p. 656 (1890); Shelley, *B. Afr.* i, p. 17 (1896).

*Description. Adult male*.—Above, ashy-grey mottled with brown; crown black; lores and anterior half of cheeks, throat and under surface blackish-brown; centre of occiput, ear-coverts and nape of neck white; behind the white nape a black collar which joins the black of the sides of neck to the black under surface of body; wing-coverts brown edged with grey; quills dark brown edged with grey; two centre tail-feathers pale brown edged with white; rest of tail-feathers dark brown edged with grey, the outermost feather white with a patch of brown at the base of the inner web.

Iris dark brown; bill horn-coloured; legs and feet dark flesh-colour.

Length 4·90; wing 3·15; tail 1·90; tarsus 0·75; culmen 0·50.

♂ - v - Damaraensis Subsp. nov. 745<sup>h</sup>



*Adult female*.—Lores and eyebrow buffish ; throat white ; under surface white tinged with rufous, otherwise like the male.

*Distribution*.—Northern Cape Colony, Griqualand West, and the Transvaal, extending to Great Namaqua and Damara Land and thence to the Congo River.

*Habits*.—In Northern Cape Colony these small Larks congregate in considerable flocks during autumn and winter, and usually keep to the open veldt, where they run about on the ground in search of fallen grass-seeds and small insects. If disturbed they fly for a short distance, with undulating flight, and alight again directly on the ground at no great distance. While running about they frequently utter a shrill, but not very loud, chirp. About the middle of August the flocks break up and the birds separate in pairs, and about a month later commence to build their nests. Some slight hollow is chosen by the side of a tuft of grass ; this is lined with fine dry grass, to which a few horse-hairs are occasionally added, and in this slight nest two or three eggs are laid. These are of a pale cream-colour or dull white, somewhat thickly spotted all over with two shades of pale umber brown. They average  $0.80 \times 0.65$ .

743 *Emmott's white checked Finch*  
108. **Pyrrhulauda smithi.** *Smith's Lark.*

*Pyrrhulauda leucotis* (nec. Stanley) ; *Smith Ill. Zool. S. Afr., Birds.* pl 26 (1839) ; *Layard, B. S. Afr.* p. 210 (1867).

*Pyrrhulauda smithii*, *Ayres, Ibis*, 1871, p. 258 ; *Gurney in Andersson's B. Damara Land*, p. 189 (1872) ; *Sharpe. ed. Layard's B. S. Afr.* pp. 493, 851 (1884) ; *id. Cat. B. M.* xiii, p. 658 (1890).

*Pyrrhulauda smithi*, *Shelley, B. Afr.* i, p. 17 (1896).

*Description. Adult male*.—Above, deep chestnut, the feathers of lower back and scapulars edged with white ; rump and upper tail-coverts grey ; least wing-coverts whitish ; median and greater coverts chestnut edged with buff, the median coverts black at the base ; primary coverts and quills black edged with rufous ; tail black, the outer feather white on the outer web, the rest margined with rufous ; crown and nape black, followed by a white and this by a black collar ; lores, feathers round eye, and fore cheeks black ; ear-coverts, sides of face and hind cheeks white ; a line of black from the crown to the throat ; throat and under surface black ; the sides brownish, the flanks white ; thighs white ; under tail and

wing-coverts and axillaries black; quills below dusky with light inner margins.

Iris hazel; bill ash-white; legs and feet ash-coloured.

Length 5.00; wing 3.30; tail 1.90; tarsus 0.70; culmen 0.50.

*Adult female*.—Without black on the head, both head and upper surface being chestnut; collar round hind neck buff; sides of head pale rufous; below, buff-brown, the centre of abdomen black.

Length 4.60; wing 3.10; tail 1.75.

*Distribution*.—From Northern Cape Colony and Griqualand West to the Cunéné and Zambesi Rivers, extending into Angola and German East Africa as far north as Zanzibar. Andersson writes "I have observed this species, though very sparingly, in Damara Land, and also to the northward, but not in Great Namaqua Land." Not uncommon on the Orange River, according to Dr. Bradshaw.

*Habits*.—Very like *P. verticalis* in its habits, but it is usually in smaller flocks, numbering from ten to forty or fifty individuals, and it is often found feeding on the ground among dwarf bushes, while *P. verticalis* keeps to more open country. Mr. T. Ayres found these Larks in the Northern Transvaal on the Limpopo River; he remarks, "We found these birds frequenting the open glades along the banks of the Limpopo in companies consisting of sometimes as many as fifty individuals. They were feeding on grass-seeds after the manner of Finches."

Mr. Andersson writes regarding the habits of this species in Damara Land: "It is seen in small flocks, which frequent the ground in open localities covered with grass and scanty dwarf vegetation, among which they run with great rapidity, taking flight for a short distance only when disturbed."

## Genus II. **AMMOMANES.**

*Type.*

**Ammomanes**, *Cabanis, Mus. Hein. Th. i, p. 125 (1850) ...A. deserti.*

Bill thick, higher than broad at nostrils, slightly curved; the nostrils concealed by a tuft of plumes. Wing with ten primaries, the first small, but exceeding the primary-coverts in length, the second much shorter than the third. Hind claw curved, shorter than the hind toe. Sexes alike in colour, this being very uniform and of a sandy or rufous tone.

Larks belonging to this genus are found in open sandy plains

and deserts where their plumage resembles the soil, more or less, in colour. They spend most of their time on the ground, but occasionally when singing, rise in the air for a short distance, and fall again abruptly.

Eight species of the genus have been described, distributed over the arid plains of Africa and Asia. Three species are confined to South Africa.

*Key to the Species.*

- a. Under surface, including the under wing-coverts, white; the breast unstreaked ..... *A. grayi*, p. 198.
- b. Under wing-coverts lead-grey; the breast streaked with dusky.
  - a<sup>1</sup>. Smaller: wing 3·60; chest slightly spotted with dusky..... *A. erythrochlamys*, p. 199.
  - b<sup>1</sup>. Larger: wing 4·10; breast much streaked with black ..... *A. ferruginea*, p. 200.

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109. <sup>*opsis*</sup> **Ammomanes grayi.** *Gray's Lark.*

*Alauda grayi*, Wahlberg, *Cefvers*, Stockholm, 1855, p. 213; Gurney in Andersson's *B. Damara Land*, p. 193 (1872).

*Ammomanes grayi*, Sharpe, *P. Z. S.* 1874, pl. lxxvi, fig. 2; *id. ed. Layard's B. S. Afr.* p. 507 (1884); *id. Cat. B. M.* xiii, p. 643 (1890); *Shelley, B. Afr.* i, p. 17 (1896).

*Description.* *Adult male*.—Above, reddish-brown; wing-coverts like the back; quills grey tipped with white and margined externally with reddish-brown; tail-feathers dark brown, their bases whitish, their inner webs tipped with white, the outer webs of the two outer feathers whitish; forehead, lores, eyebrow and sides of face dull white; in front of eye a spot of dusky; ear-coverts light rufous; under surface of body white, the breast and sides tinged with fawn-colour; on each side of breast a patch of black; under wing-coverts dull white.

Length, in flesh, 5·60; of skin 5·20; wing 3·25; tail 1·85; tarsus 0·85; culmen 0·65.

*Adult female*.—Like the male in colour but smaller.

Length, in flesh, 5·35; wing 3·05; tail 1·80.

*Distribution*.—South-West Africa: Damara Land.

*Habits*.—Andersson writes: "This Lark is found on the barren plains in the neighbourhood of Walfisch Bay, as well as some



distance inland; but I have not observed it so far east as Objimbinque. It feeds on seeds and insects, and is comparatively tame, but where grass abounds it is difficult to secure. A few individuals are usually found together."

740 *Pseudammomanes*  
110. **Ammomanes erythrochlamys.** *Red-backed Lark.*

*Alauda erythrochlamys*, *Strickl. Contr. Orn.* 1852, p. 151; *Gurney in Andersson's B. Damara Land*, p. 194 (1872).

*Megalophonus erythrochlamys*, *Ayres, Ibis*, 1874, pl. iii, fig. 1; 1878, p. 298.

*Ammomanes erythrochlamys*, *Sharpe, ed. Layard's B. S. Afr.* p. 506 (1884); *id. Cat. B. M.* xiii, p. 648 (1890); *Shelley, B. Afr.* i, p. 17 (1896).

*Description. Adult male in summer.*—Above, including the wings, cinnamon-red, the wing-feathers edged externally with cream-colour; upper tail-coverts and two centre tail-feathers paler cinnamon, the other tail-feathers with their outer webs and tips cinnamon-red, their inner webs light fuscous; crown like the back; eyebrow and spot below eye pale cream colour; ear-coverts pale rufous; under surface of body yellowish-white, the chest spotted with triangular markings of brown; under wing-coverts buff.

Iris hazel; bill dusky; legs and feet pale brown.

Length, in flesh 8·00; of skin 7·00; wing 4·20; tail 3·00; tarsus 1·15; culmen 0·75.

*Adult male in winter.*—Above, including the wing-coverts, pale fawn-colour streaked with reddish-brown, the coverts edged with buff; quills pale brown edged with buff; tail-feathers dark brown edged with buff, the outer web of outer feather entirely buff; lores, eyebrow, streak below eye, and cheeks white; ear-coverts fawn-colour; below, cream-colour, the sides tinged with rufous, the chest with triangular spots of pale brown; under wing-coverts buff.

*Adult female.*—Like the male in colour but slightly smaller.

Length 7·12; wing 3·75; tail 2·50; tarsus 1·12.

*Distribution.*—From the Transvaal, where it is a resident, to Damara Land.

*Habits.*—But little is known of the habits of this Lark. Mr. T. Ayres writes in the "Ibis" for 1874, p. 103, "I shot the specimen sent (a female) amongst some rocks and stones in a range of low hills some three or four miles from Potchefstroom; it had a peculiar knack of hiding itself by creeping over and about the bits of rock."

In the "Ibis" for 1878, p. 298, the same observer remarks, regarding two males of this species, "shot November 2, on the rocky ranges near Potchefstroom." "Rises a short distance, and utters a prolonged 'whew' whilst descending. The stomach of one of these specimens contained insects."



*Ammomanes ferruginea.*

111. *Ammomanes ferruginea*. Ferruginous Lark.

*Alauda ferruginea*, Smith, Ill. Zool., S. Afr. pl. 29 (1839); Layard, B. S. Afr. p. 208 (1867).

*Ammomanes ferruginea*, Sharpe, ed. Layard's B. S. Afr. p. 504 (1884); id. Cat. B. M. xiii, p. 649 (1890); Shelley, B. Afr. i, p. 17 (1896).

*Description.* *Adult*.—Like *A. erythrochlamys* but larger and of a much darker rufous; the flanks ash-coloured, the breast and flanks streaked with black; under wing-coverts lead-colour.

Iris dark brown; bill yellowish-brown; legs and feet light yellowish-brown.

Length 7·50; wing 4·10; tail 3·20; tarsus 1·20; culmen 0·70.

*Distribution*.—Northern Cape Colony bordering on the Orange River.

*Habits*.—Sir Andrew Smith gives the following account of this Lark:—"The extensive plains immediately to the southward of the Orange River, commonly called the Bushman Flats, form the favourite habitat of this Lark. It is a wild bird, manifesting considerable suspicion at the appearance of man, and unless in the

mornings, rarely permits him to approach so near as to enable him to shoot it. It soars very frequently, particularly in the early part of the day, and about sunrise whistles delightfully ; being, while so occupied, generally perched upon the summit of the highest bush which exists in the locality."

Genus III. **CALENDULA.**

*Type.*

**Calendula**, *Swainson*, *Class B. ii*, p. 292 (1837) .....*C. crassirostris*.

Bill thick, much compressed, higher than broad at the nostrils, the culmen curved and convex ; the commissure arched ; the tip of the upper mandible wide above and inflexed. Nostrils covered with stiff bristle-like plumes. Wing rather long ; the first primary



*Calendula crassirostris.*

equal to the inner toe and claw ; the second nearly equal to the third and fourth which are longest. Tail slightly forked. Lateral toes equal ; hind claw long, nearly straight and pointed, longer than the toe. Plumage : the back mottled, the feathers with black centres.

This Genus contains a single species the range of which is confined to South Africa.



*magnirostris magnirostris*112. **Calendula crassirostris.** *Thick-billed Lark.**L'Alouette à gros bec, Levaillant, Ois. d'Afr. pl. 193 (1805).**Alauda crassirostris, Vieillot, Nouv. Dict. i, p. 373 (1816); Layard's B. S. Afr. p. 208 (1867); Shelley, Ibis, 1875, p. 81.**Calendula crassirostris, Gurney in Andersson's B. Damara Land, p. 195 (1872); Sharpe, P. Z. S. 1874, p. 636; id. ed. Layard's B. S. Afr. p. 513 (1884); id. Cat. B. M. xiii, p. 639 (1890); Shelley, B. Afr. i, p. 17 (1896).*

"Dubbeld Leeuwick" of the Dutch.

*Description. Adult male in summer.*—Above, dark brown, the feathers edged with fulvous, the lower back and rump lighter; crown light brown streaked with brown; hind neck rather more fulvous streaked with dark brown; wing-coverts dark brown edged with ash-colour; quills brown edged and tipped with white; upper tail-coverts ash-brown streaked with dark brown; tail-feathers dark brown edged with grey, the two outer margined and tipped with dull white; a streak on each side of the crown, feathers above and below eye and lores reddish white; cheeks reddish-white spotted with brown; ear-coverts brown streaked with buff; under surface yellowish-white, the throat spotted, the lower breast and sides narrowly striped with blackish; flanks brown streaked with dark brown; under wing-coverts pale brown margined with white.

Iris brown; upper mandible horn-coloured; the lower paler; legs and feet pale brown.

Length 6.80; wing 4.00; tail 2.80; tarsus 1.00; culmen 0.75.

*Adult male in winter.*—Duller than in summer; most of the feathers with grey edges; below yellowish, the breast less spotted and with paler brown.

*Adult female.*—Resembles the male in colour but is smaller.

*Young.*—Of a more uniform brown; the feathers of the upper parts edged with white.

*Distribution.*—Chiefly in the western districts of South Africa:—in Cape Colony very generally distributed from Cape Town over the northern and western parts of the Colony, ranging into the Orange Free State and throughout Great Namaqua into Damara Land. Common on the Cape Flats.

*Habits.*—The Thick-billed Lark is usually to be met with on level or gently undulating ground and on sandy soil with a scanty growth of bushes, occasionally it may be seen on ploughed land. In Damara Land, according to Andersson, "it frequents localities

*7356 C. m. harei northern Thick billed Lark*

covered with grass and dwarf vegetation, and frequently those of a rocky character."

This Lark is nearly always in pairs; it has a prolonged drawling call-note, and in spring a short song, often uttered by the male as he rises for a short distance on the wing: it feeds on seeds and insects, especially on small beetles.

About the middle of September, in Cape Colony, the female constructs her nest, of dry grass and horse-hair, in a slight hollow scratched at the side of a grass-tuft. Four or five eggs are laid towards the end of the month. They are pale cream-colour, more or less spotted and mottled with various shades of purplish-brown and grey. They measure  $0.90 \times 0.65$ .

#### Genus IV. **GALERITA.**

*Type.*

**Galerita**, *Boie, Isis*, 1828, p. 321 ..... *G. cristata*.

Bill slightly elongated, moderately strong; the nostrils basal, concealed by recurved feathers. Wings moderately long, broad, the first quill shorter than the coverts, the second shorter than the fifth, the third, fourth and fifth nearly equal and longest. Tail moderate, slightly emarginate. Tarsi rather long. Claws short, curved, the hind claw long and slightly curved. Crown crested.



*Galerita modesta.*

The Crested Larks are found in Southern and Central Europe, Southern Asia, and over the greater part of Africa. About six species, and a number of races, differing in shade of colour from the typical species, are known.

The Crested Larks inhabit open country, both desert and cultivated, the common European species being often found on roads. They are not as a rule gregarious but are frequently found in single pairs. Their short song, uttered from a perch on some slight elevation, sometimes on the wing, is not unpleasing. They feed on the ground on insects and small seeds, build cup-shaped nests in some slight hollow and lay four or five whitish eggs spotted and blotched with purplish-brown and grey.

### 113. *Galerita modesta*. *Heuglin's Crested Lark*.

*Galerita modesta*, *Heugl. Jour. f. Orn.* 1864, p. 274; *Shelley, P. Z. S.* 1888, p. 28; *id. B. Afr.* i, p. 17 (1896).

*Geocoraphus modestus*, *Heugl. J. f. O.* 1868, p. 229; *id. Orn. N.O.-Afr.* p. 691, pl. 23 (1871).

*Heliocorys modesta*, *Sharpe, Cat. B. M.* xiii, p. 623 (1890).

*Description.* *Adult male*.—Above, buff-brown, the feathers with black centres; upper tail-coverts tinged with rufous; wing-coverts blackish-brown edged with buff or grey; quills blackish-brown margined with rufous; tail-feathers blackish-brown edged with fulvous, the outer rufous-buff with a diagonal dark streak across both webs, the next broadly edged externally with rufous-buff; crown slightly crested, coloured like the back; a broad eyebrow, lores, and feathers below eye whitish; ear-coverts light brown; cheeks white crossed by a black streak; throat grey; malar line lack; rest of under surface grey tinged with rufous-buff on the sides and flanks, the chest thickly spotted and streaked with black, the sides and flanks streaked with dark brown; axillaries and under wing-coverts rufous-buff.

Iris dusky brown; bill flesh-colour; feet reddish-brown.

Length 5·85; wing 3·30; tail 1·95; tarsus 0·80; culmen 0·45.

*Adult female*.—Similar to the male in colour but smaller; length 5·40; wing 3·10; tail 1·90.

*Distribution*.—Equatorial Africa: Clan William in Cape Colony (Leipoldt).

### Genus V. **MIRAFRA.**

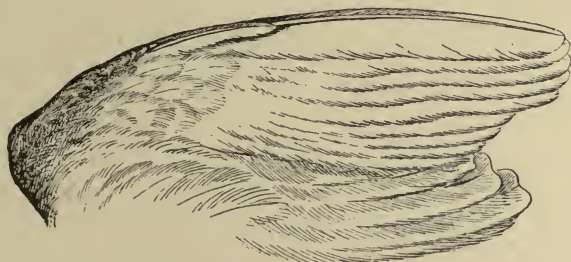
*Type.*

**Mirafra**, *Horsfield, Trans. Linn. Soc.* xiii, p. 159 (1820)...*M. javanica*.

Bill short, elevated at the base, compressed, the culmen curved to the tip; nostrils exposed, covered by membrane only, basal and lateral. Wings very short; the first or outer quill well developed,



equal to or exceeding the inner toe and claw in length ; the second quill nearly as long as the third, which is longest. Tail moderate. Tarsus longer than the middle toe and slender ; toes moderate, the outer and inner equal. Hind claw short and somewhat curved, the front claws short and curved.



*Mirafra cheniana.*

The Genus *Mirafra* includes twenty-four species of Larks which are distributed over Africa and Southern Asia. Eleven species are found, more or less commonly, in South Africa and are nearly all resident. The *Mirafra* frequent plains and open bush-land, feed on the ground on insects and small seeds, but habitually perch on trees and bushes. All the species are gifted with a pleasant song which is frequently uttered by the bird as it mounts for a short distance in the air. The nest is built in some slight hollow in the ground by the side of a tuft of grass. About half the species build

domed, the remainder cup-shaped nests. They lay from three to five whitish eggs, thickly spotted and zoned with different shades of purplish-brown and grey.

*Key to the Species (after Sharpe).*

- a. Light pattern of outer tail-feather white or pale fulvous.
  - a<sup>1</sup>. Inner lining of wing-quills not rufous.
    - a<sup>2</sup>. Above black; ear-coverts black; throat and breast thickly spotted with black... *M. nigricans*, p. 207.
    - b<sup>2</sup>. Above tawny or sandy, broadly streaked with black.
      - a<sup>3</sup>. Smaller; wing about 3·30; breast thickly spotted with black ..... *M. sabota*, p. 208.
      - b<sup>3</sup>. Larger; wing about 3·50; breast thinly spotted with black ..... *M. nævia*, p. 209.
  - b<sup>1</sup>. Inner lining of wing-quills entirely rufous, extending over both webs of the primaries at the base.
    - c<sup>2</sup>. Culmen less than 0·65.
      - c<sup>3</sup>. Back rufous ..... *M. africanoides*, p. 210.
      - d<sup>3</sup>. Back grey ..... *M. damarensis*, p. 211.
    - d<sup>2</sup>. Culmen over 0·75; the hinder crown rufous with black tips ..... *M. africana*, p. 212.
  - c<sup>1</sup>. Inner lining of wing-quills and under wing-coverts isabelline white ..... *M. fringillaris*, p. 214.
  - d<sup>1</sup>. Inner lining of wing-quills and under wing-coverts deep chestnut ..... *M. cheniana*, p. 215.
- b. Light pattern of outer tail-feathers tawny-rufous.
  - e<sup>1</sup>. Wing-quills brown, edged with ash-brown; centre tail-feathers pale rufous with broad blackish centres; crown grey spotted with brown ..... *M. fischeri*, p. 216.
  - f<sup>1</sup>. Wing-quills dusky-brown with rufous or ashy margins; centre tail-feathers blackish mottled with rufous; crown ash-grey with but little rufous ..... *M. apiata*, p. 217.
  - g<sup>1</sup>. Wing-quills almost entirely rufous; the tips dusky; centre tail-feathers rufous with black bars; crown rufous with black spots ..... *M. rufipilea*, p. 218.

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 114. *Mirafra nigricans*. *Dusky Lark*.

*Alauda nigricans*, *Sundev. Œfv. K. Vet.-Akad. Förh. Stockh.*, 1850, p. 99.

*Mirafra nigricans*, *Sharpe, P. Z. S.*, 1874, p. 651; *id. ed. Layard's B. S. Afr.*, p. 530 (1884); *id. Cat. B. M.* xiii, p. 619 (1890); *Bocage, Orn. Angola*, p. 376, pl. viii, fig. 1 (1881); *Ayres, Ibis*, 1884, p. 231; 1886, p. 290; *Shelley, B. Afr.* i, p. 16 (1896).

*Description.* *Adult male in winter*.—Above, ashy-black, the feathers broadly edged with rufous; wing-coverts, quills and tail-feathers black broadly margined with rufous, the secondaries and inner primaries tipped with white; eyebrow white; lores and feathers below eye whitish; ear-coverts black and white; line below the lores and from the bill to the ear-coverts black; a malar line black; cheeks and lower surface of body dirty white, the lower throat and breast thickly marked with triangular black spots becoming streaks on the lower breast; flanks mottled black and white; under wing-coverts black edged with white; quills below dusky becoming rufous at the base of the inner webs.

Iris hazel; bill dusky; legs and feet yellowish.

Length of skin 7.40; in flesh 8.00; wing 4.75; tail 2.95; tarsus 1.15; culmen 0.70.

*Adult male in summer*.—Almost entirely black owing to the paler edges to the feathers being abraded.

*Distribution*.—From the Transvaal through the Makalaka Country to Benguela. Originally discovered by Professor Wahlberg on the Limpopo River in the Transvaal, and subsequently obtained by Dr. Bradshaw in the Makalaka country, and by Anchieta at Humbe in Benguela. Not uncommon in the Transvaal near Potchefstroom and Rustenburg.

*Habits*.—Mr. T. Ayres writes in the "Ibis" for 1884 regarding a male of this somewhat rare Lark, shot on January 10: "This, to me, exceedingly scarce bird was shot amongst the hills to the north of Rustenburg, within six miles of the Crocodile River; it was a solitary bird, running on some flat rocks with much sheltering scrub about, and very Pipit-like in its appearance and manners." "Stomach contained locusts." In the "Ibis" for 1886 he remarks regarding another example also killed on January 10: "This is the second specimen of *M. nigricans* which I have met with. I found it amongst the scrubby bush on a rocky range of hills, some couple of miles from the banks of the Mooi River and about twenty



from the sources of that stream. My attention was attracted to the bird by its large size, dipping flight, and Pipit-like appearance."

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*Sabota*

115. **Mirafra sabota.** *Sabota Lark.*

*Mirafra sabota*, *Smith, Rep. Exp. Centr. Afr.* 1836, p. 47; *id. Ill. Zool. S. Afr. Birds*, pl. 89, fig. 2 (1843); *Sharpe, ed. Layard's B. S. Afr.* p. 526 (1884); *id. Cat. B. M.* xiii, p. 618 (1890); *Shelley, B. Afr. i.* p. 16 (1896).

*Megalophonus sabota*, *Gray, Gen. B.* ii, p. 382 (1844); *Layard, B. S. Afr.* p. 213 (1867).

*Description.* *Adult male in winter.*—Above, fawn-colour, the centre of each feather dusky brown; back of neck tinged with reddish; wing-coverts dark brown with broad margins of fawn-colour; primary coverts grey-brown edged and tipped with white; quills dark brown edged with buff and tipped with white; upper tail-coverts dark brown edged and tipped with fulvous; tail-feathers blackish tipped with white and edged with buff; crown fawn-colour mottled with blackish; eyebrow and streak below eye white; in front of eye black; ear-coverts buff-colour; cheeks buff spotted with black; throat buff-white; rest of under surface brownish-white, the chest marked with triangular spots of dark brown; the flanks tinged, the sides streaked with rufous; a illaries and under wing-coverts grey margined with white.

Iris brown; bill horn-coloured, the upper mandible darker; legs and feet flesh-coloured.

Length 5·80; wing 3·30; tail 2·40; tarsus 0·90; culmen 0·55.

In summer the light margins to the feathers of the upper parts disappear and the entire plumage is rufous-brown; the chest is tinged with rufous and more distinctly spotted.

*Adult female.*—Resembles the male in colour, but is smaller.

Length 5·50; wing 3·25; tail 2·25.

*Distribution.*—East and South-east Africa; from the Orange Free State to Masai Land. Of rather common occurrence in some parts of the Transvaal, Bechuana, and Matabili Lands.

*Habits.*—In the Transvaal these Larks frequent open glades on the outskirts of the bush country. They feed on the ground in small parties or in pairs, and if disturbed, sometimes fly off to settle again on the ground, but more frequently to take refuge on the nearest bush or low tree. Sir Andrew Smith, who met with this species near Latakoo, described it as having there the same

habit of perching on low bushes when frightened. These Larks feed on small grass-seeds and insects, and like most of their congeners, occasionally sing very sweetly, sometimes from the top of a bush, more often while hovering a few yards above the ground. In the Transvaal they breed in December. A hollow, about three inches deep, is scratched by the side of a grass-tuft, and lined with fine dry grass, and in it, about the middle of December, are deposited three eggs of a greyish ground colour, profusely speckled and spotted all over with brown and purplish-brown. They measure about  $0.78 \times 0.58$ .

*Sabota nævia*

116. **Mirafra nævia.** *Dark-lined Lark.*

*Alauda nævia*, Strickl. Contr. Orn, 1852, p. 152.

*Megalophonus nævius*, Gurney in Andersson's *B. Damara Land*, p. 199 (1872).

*Megalophonus sabota*, Gurney in Andersson's *B. Damara Land*, p. 195 (1872).

*Mirafra nævia*, Sharpe, ed. Layard's *B. S. Afr.*, p. 524 (1884); *id. Cat B. M.* xiii, p. 617 (1890); *Shelley, B. Afr.*, i, p. 16 (1896).

*Adult male in summer.*—Above, reddish-brown streaked with dark brown; crown paler; hind neck ash-brown; scapulars dark brown margined with rufous; wing-coverts like the back; quills black edged with rufous externally and tipped with grey; upper tail-coverts rufous streaked with brown and tipped with buff; tail black margined and tipped with buff, the centre feathers broadly edged with rufous; eyebrow, feathers below eye and lores whitish; feathers in front of eye dusky; ear-coverts dark brown streaked with buff; cheeks and under surface of body white tinged with buff on the chest and sides, the lower throat and chest marked with triangular spots of brown; under wing-coverts lead-colour.

Iris hazel; bill horn-coloured; legs and feet flesh-colour.

Length 6.50; wing 3.50; tail 2.35; tarsus 0.95; culmen 0.75.

*Adult male in winter.*—Paler than in summer; the hind-neck distinctly grey, the eyebrow more distinctly white; the chest narrowly streaked with pale brown.

*Adult female.*—Similar to the male in plumage but smaller.

Length 5.75; wing 3.40; tail 2.35.

*Distribution.*—From Northern Cape Colony and Griqualand West to Damara Land and Ondongo.

*Habits.*—Andersson gives the following account of this Lark

under the headings of *Megalophonus sabota* and *M. nævius*, in the "Birds of Damara Land," pages 195 and 199: "This is a very common bird about Objimbinque; it is by no means timid, and settles on trees and bushes as well as on the ground. Its food consists of seeds and insects."

"I met with this Lark at various places north of the Omaruru River, where, although rather local, it is abundant in some localities, and especially in Ondongo. On April 25 I found its nest in the last-named locality, containing three eggs of a very elongated form and much pointed at one end. Other nests which I met with on various occasions were either empty or contained young birds.

"The nest is composed of fine grasses, and is built upon the ground, into which the lower portion of it is sunk to the depth of two or three inches; it is placed between and resting against two stout plants, and is round and dome-shaped, with one large opening to the southward, the side freest from the wind and rain.

"I am always delighted to hear this bird as it makes the welkin ring with its sonorous song and call, composed of a series of notes, which it utters either when perched on a tree or when moving from one spot to another. Whilst thus flying and singing it may be seen alternately to open and close its wings, sometimes almost bringing them to meet over its back, when it appears for the moment to be suspended in the air."

Mr. T. Ayres writes: "These Larks are rather common amongst the thorn-trees on the banks of the Limpopo, where they occur either singly or in pairs. When disturbed they usually settle on the top of some low thorn and remain till the cause of alarm has disappeared, when they return to the ground in search of seeds and insects" ("Ibis," 1886, p. 290).

*Anacoup*

731 117. **Mirafra africanoides.** *Fawn-coloured Lark.*

*Mirafra africanoides*, *Smith, Rep. Exp. C. Afr.* 1836, p. 47; *id. Ill. Zool. S. Afr. Birds*, pl. 88, fig. 2 (1843); *Sharpe, ed. Layard's B. S. Afr.* p. 523 (1884); *id. Cat. B. M.* xiii, p. 616 (1890); *Shelley, B. Afr.* i, p. 16 (1896).

*Megalophonus africanoides*, *Gray, Gen. B.* ii, p. 382 (1844); *Gurney in Andersson's B. Damara Land*, p. 198 (1872); *Layard, B. S. Afr.*, p. 214 (1867).

*Description.*—*Adult male in summer.*—Above reddish-brown, narrowly streaked with black; wing-coverts dark brown with

731b A-a-haree Hares Fawn-coloured Lark



rufous edges and narrow black shaft-streaks; quills with broad rufous margins and dark brown centres; upper tail-coverts pale brown; tail-feathers dark brown edged with reddish-brown, the outer web of the outermost edged with whitish; eyebrow, feathers round the eye and lores whitish; spot in front of eye dusky; ear-coverts bright rufous; cheeks and under surface whitish, with triangular dusky spots on the chest; under wing-coverts and inner webs of quills rufous.

Iris chestnut; bill yellow-brown; legs and feet flesh-coloured.

Length 6·75; wing 3·70; tail 2·90; tarsus 0·98; culmen 0·60.

*Adult female*.—Similar to the male in colour, but rather smaller.

Length 5·75; wing 3·45; tail 2·55.

In winter the plumage is less bright owing to the disappearance of the rufous margins to the feathers, which are now sandy-brown, the spots on the breast are also less numerous.

*Young*.—Resemble the adults in summer plumage, but are brighter and have the chest more thickly spotted.

*Distribution*.—South Africa: Northern Cape Colony bordering on the Orange River; northward to the Zambesi and Cunéné Rivers. It is not uncommon near Colesberg and Hopetown in Cape Colony, but is much more numerous to the north of the Orange River in Griqualand West and Bechuanaland. Andersson writes, "This bird is very frequent in the neighbourhood of Otjimbingue, and is not uncommon in various other parts of Damara and Great Namaqualand."

*Habits*.—Near Colesberg, says Mr. Ortlepp, it is "found singly, inhabiting wooded places, and abounding on tall camel or thorn trees, from whose topmost twigs they are frequently to be heard pouring out a sweet sustained song."

Andersson writes: "It is found in pairs, and is comparatively tame, flying but a short distance when disturbed, and settling on the ground or on a bush or tree; it has a kind of chirping song."

724 *Megalophonus*  
118. **Mirafra damarensis.** *Damara Lark.*

*Mirafra damarensis*, Sharpe, *P. Z. S.*, 1874, p. 650, pl. 75, fig. 2; *id.* ed. Layard's *B. S. Afr.* p. 522 (1884); *id.* *Cat. B. M.* xiii, p. 612 (1890); *Shelley. B. Afr.* i, p. 16 (1896).

*Description*.—*Adult male in winter*.—Above sandy-grey narrowly streaked with black; wing-coverts paler with grey margins; greater coverts fawn-colour margined with whitish; quills dark brown

tinged externally with buff, the basal two-thirds of the primaries, and a less extent of the secondaries, rufous; tail-feathers blackish, the centre feathers tinged with grey and edged and tipped with whitish, the three outer feathers bordered and tipped with white, the outer web of the outermost entirely white; lores, eyebrow, and sides of face white; ear-coverts brownish; under surface white, tinged with cream colour below the throat, the chest speckled with dark brown; thighs buff; under wing-coverts and base of quills rufous.

Length 5.50; wing 3.45; tail 2.40; tarsus 1.10; culmen 0.65.

*Distribution*.—Ovampo Land: the type was procured by Andersson at Ondongo, in November, 1866.

732 *africana* <sup>us</sup> *africanus*  
119. **Mirafra africana.** *Rufous-naped Lark.*

*Mirafra africana*, Smith, *Rep. Exp. Centr. Afr.*, 1836, p. 47; *id. Ill. Zool. S. Afr. Birds*, pl. 88, fig. 1 (1843); Sharpe, *ed. Layard's B. S. Afr.* pp. 519, 851 (1884); *id. Cat. B. M.* xiii, p. 607 (1890); Shelley, *B. Afr.* i. p. 16 (1896).

*Megalophonus africanus*, Gray, *Gen. B.* ii, p. 382 (1844); Layard, *B. S. Afr.* p. 212 (1867).

*Megalophonus rostratus*, Hartlaub, *Ibis*, 1863, p. 326, pl. 9; Layard, *B. S. Afr.* p. 213 (1867).

*Description*. *Adult male in summer*.—Above, brown, the feathers margined with reddish-brown and streaked centrally with black; wing-coverts bay-red streaked with brown; quills chestnut-red for the basal three-fourths, the terminal fourth brown; crown and nape chestnut-red streaked with black; the forehead darker, mottled with black; lores and eyebrow buff; ear-coverts and cheeks buff spotted with brown; throat dull white; rest of under surface buff, the breast and sides tinged with chestnut, the lower throat and sides of chest sparingly marked with triangular black streaks; axillaries, under wing-coverts, and under surface of quills, excepting the ends, chestnut-red.

Iris hazel; upper mandible dusky, the edges and the under mandible yellowish-brown; legs and feet flesh-colour.

Length 7.00; wing 3.80; tail 2.90; tarsus 1.20; culmen 0.80.

*Adult male in winter*.—Much darker than in summer; the crown broadly streaked with dark brown; forehead dark brown; back of neck and rump tinged with grey; below a deeper chestnut; the breast more spotted.

732b. *a. transvaalensis* Transvaal Rufous-naped Lark  
732c. *a. griseiceps* Rhodesia do  
732d. *a. pallidior* Ovampo do

*Adult female*.—Resembles the male but is smaller, with a more slender bill.

Length 6·75; wing 3·50; tail 2·70; tarsus 1·15; culmen 0·70.

*Young*.—Above, brown, with but little chestnut-red, the feathers tipped with fulvous and barred subterminally with black crescents; below dull buff-white, the breast tinged with reddish-brown and mottled with bars of deeper red-brown.



*Mirafra africana.*

*Distribution*. — From Eastern Cape Colony through Natal, Zululand, the Transvaal, Bechuanaland, Matabililand, and the Portuguese Territory as far north as Zanzibar. On the West coast from the Cunéné River to Gaboon. In Cape Colony it is not rare in the district between Port Elizabeth and Grahamstown and thence to East London and Griqualand East. In Natal it is somewhat common in suitable localities, and in the Transvaal is tolerably plentiful and resident between the Vaal and Hartz Rivers, to the west of Potchefstroom. It occurs near Rustenburg and breeds abundantly on the Marico and Limpopo Rivers. Moffat



met with this species at Kuruman and Frank Oates to the south of the Zambesi. Andersson did not fall in with it in Damara Land, although it is common to the north of the Cunéné River according to Anchieta.

*Habits.*—Generally met with on open grassy plains in pairs, feeding on the ground on small seeds and insects. If alarmed or followed it runs along the ground with great swiftness and frequently hides under the grass; sometimes it takes wing at once uttering a sharp cry as it does so. On sunny days this Lark is fond of airing itself on the top of a bush, constantly opening and shutting its wings as it utters its loud note. At times it rises a few yards in the air with a fluttering flight, during which it sings a few notes not unmelodiously. In the North-western Transvaal these Larks breed in numbers. The nest is well concealed and by no means easy to find. A hollow is scratched well under shelter of a tuft of grass and lined with fine dry grass, some grass stems are then pulled over the nest and intertwined with long blades of dry grass so as to form an arched bower, a small side entrance being left on one side. Three elongated eggs are laid about the second week in December; these are cream-coloured, spotted all over with pale brown, more thickly at the obtuse end with dark brown and purplish-brown, often in the form of a zone. They average  $0.95 \times 0.60$ .

120. *Mirafra fringillaris*. *Finch-like Lark.*

*Mirafra fringillaris*, *Sundev. Œfv. K. Vet.-Ak. Förh. Stockh.* 1850, p. 99; *Sharpe, P. Z. S.* 1874, p. 649, pl. 75, fig. 1; *id. ed. Layard's B. S. Afr.* p. 527 (1884); *id. Cat. B. M.* xiii, p. 606 (1890); *Shelley, B. Afr. i*, p. 15 (1896).

*Description. Adult male.*—Above, dusky brown, the feathers edged with buff, the back tinged with rufous; wing-coverts brown edged with reddish-brown; quills darker brown margined with rufous; tail dark brown, edged with fulvous; the outer feather chiefly white, the next white on the external edge; eyebrow and lores buffish; ear-coverts rufous spotted with brown; sides of neck, cheeks, and throat buff; rest of under surface cream-coloured thickly spotted with dark brown on the chest; under surface of quills and under wing-coverts buff-white; edge of wing mottled brown and white.

Iris hazel ; bill horn-coloured ; legs and feet reddish-brown.

Length 5·90 ; wing 3·10 ; tail 2·50 ; tarsus 0·85 ; culmen 0·60.

*Distribution*.—From the Transvaal to Damara Land. A very common resident in the North-western Transvaal.

*Habits*.—This Lark frequents open glades in thorny bush, and runs much on the ground in search of the small seeds and insects on which it feeds. It is usually in small flocks or single pairs. In spring it frequently mounts into the air "on quivering wing," and sings melodiously until it sinks again to the ground. It breeds abundantly in the Transvaal in the neighbourhood of the Limpopo and Marico Rivers. A hole is scratched in the ground under shelter of a tuft of grass, and this is lined with dry grass ; many of the surrounding grass-blades are bent over the nest and intertwined with long pieces of dry grass, so as to shelter it from above, a side entrance being left for the ingress and egress of the bird. From two to four eggs are deposited about the first week in December. These vary considerably, but are usually of a pale bluish ground colour, mottled and speckled all over with different shades of reddish-brown and grey or slate-colour, the spots frequently forming a zone round the greatest diameter. They average 0·80 × 0·62.

*Mirafra*

750

121. *Mirafra cheniana*. *Latakoo Lark*.

*Mirafra cheniana*, *Smith, Ill. Zool. S. Afr. Aves*, pl. 89, fig. 2 (1843) ;

*Sharpe, ed. Layard's B. S. Afr.* pp. 528, 852 (1884) ; *id. Cat.*

*B. M.* xiii, p. 603 (1890) ; *Shelley, B. Afr.* i, p. 15 (1896).

*Megalophonus chenianus* Gray, *Gen. B.* ii, 382 (1844) ; *Layard, B. S. Afr.* p. 214 (1867).

*Description. Adult*.—Above, dark brown, the feathers with rufous margins, the wing-coverts with black bases, the greater coverts dark brown with rufous margins ; quills dark brown with broad margins of rufous ; upper tail-coverts dark brown with paler edges, two centre tail-feathers dark brown with rufous margins ; the two outermost white with a spot of brown on the base of the outer and covering most of the inner web of the penultimate feather, rest of tail-feathers dark brown ; eyebrow and feathers below eye buff ; ear-coverts rufous mottled with brown ; sides of neck and cheeks white mottled with brown ; throat dull white ; rest of under surface pale rufous-brown tinged with deeper rufous on the chest, flanks and thighs, the chest spotted with triangular marks of dark brown, the sides streaked ; under wing-coverts and inner web of quills rufous.

Iris light reddish-brown; upper mandible dusky, its edges and the lower mandible yellowish, legs and feet pink.

Length 5.00; wing, 3.00; tail 2.40; tarsus 0.90; culmen 0.50.

*Distribution*.—Discovered by Sir Andrew Smith near Latakoo; since obtained by Mr. T. C. Atmore on the Wittlesea Flats in Eastern Cape Colony, and by Mr. T. Ayres in the Mariqua district of the Transvaal and also at Potchefstroom.

*Habits*.—Sir Andrew Smith found this pretty little Lark on grassy plains in the neighbourhood of Latakoo, running about under the long grass, on the seeds of which, together with insects, it was feeding. Like the majority of Larks of this genus the present species frequents both open veldt and glades surrounded by bush, and perches indifferently on the ground or on bushes. Mr. T. Ayres remarks: "This Lark somewhat resembles in its habits the English Skylark, rising in the air in the early morning with the same fluttering flight and singing sweetly all the time. I observed this in the middle of February, towards the end of our summer, and the birds were then in pairs. The food of this species consists of small insects."

The same observer writes in the "Ibis" for 1880, p. 264: "This is emphatically our skylark, rising in the air to a considerable distance, fluttering, it pours forth its hymn of praise and does not weary. It enlivens the open grass veldt in particular localities, making the whole country joyous on bright days, and as these Larks are numerous, one then hears a continuous song. They must, however, be more or less migratory, for a month or two after the breeding-season the grass-lands they inhabit are silent, and the songsters are no longer there. The cock birds are of a jealous disposition, and are constantly seen chasing away the would-be admirers of their particular inamoratas; the hen-birds are silent and retiring, and in consequence are not easily obtained."

727 *Megalophonus* 122. *Mirafra fischeri*. *Fischer's Lark*.

*Megalophonus fischeri*, Reichenow, *Jour. f. Orn*, 1878, p. 266.

*Mirafra apiata* (nec Vieill.) Sharpe and Bouvier, *Bull. Soc. Zool. France*, iii, p. 77 (1878); Sharpe, ed. *Layard's B. S. Afr.* p. 851 (1884); Shelley, *Ibis*, 1882, p. 350; *id.* *P. Z. S.* 1888, p. 28.

*Mirafra fischeri*, Sharpe, *Cat. B. M.* xiii, p. 600 (1890); Shelley, *B. Afr.*, i. p. 15 (1896).

"Quatji," Matabili (Ayres).

*Description*. *Adult male*.—Above, brown, the feathers with paler margins; back and scapulars cross-barred with darker brown;

728 *Megalophonus* *nyassa* *Clapper's Lark*



wing-coverts and quills brown edged with grey, the inner secondaries with a subterminal black bar and pale tips; centre tail-feathers with blackish centres and rufous margins; remaining tail-feathers dark brown edged with reddish-brown, the outermost tawny, crossed obliquely on the inner web by black; lores and eyebrow sandy-brown; ear-coverts rufous; cheeks and under surface of body buff, the lower throat and chest tinged with vinous and sparingly spotted with brown; axillaries and under wing-coverts buff.

Iris brown; bill brownish; feet reddish.

Length 5·70; wing 3·15; tail 2·10; tarsus 1·00; culmen 0·65.

*Adult female*.—Similar to the male in plumage but a trifle smaller.

*Distribution*.—From Swazi Land to the Zambesi River, thence to German East Africa, the Upper Congo Region and Benguela.

Umvuli River, Matabililand, in September (Ayres.)

*Habits*.—Under its synonym *M. apiata*, Mr. T. Ayres writes as follows of this Lark in the "Ibis" for 1882, page 350; "A few in this part of the country (Umvuli River, Matabililand) frequenting the more open grassy patches."

*Megalophonus Cape clapper*  
725 123. **Mirafra apiata.** *Bar-tailed Lark.*

L'Alouette bateleuse, *Levaill. Ois. d'Afr.* iv, pl. 194 (1805).

*Alauda apiata*, *Vieill. Nouv. Dict.* i, p. 342 (1816).

*Brachonyx apiata*, *Smith, Ill. Zool. S. Afr.* pl. 110, fig. 1 (1847).

*Megalophonus apiatus*, *Bp. Conspect.* i, p. 244 (1850); *Layard, B. S. Afr.* p. 215 (1867).

*Mirafra apiata*, *Sharpe, P. Z. S.* 1874, p. 638; *id. ed. Layard's B. S.*

*Afr.* p. 515 (1884); *id. Cat. B. M.* xiii, p. 598 (1890); *Shelley, B.*

*Afr. i.*, p. 15 (1896).

"Clapart Leeuwerk" of the Dutch.

*Description. Adult male in summer*.—Above, dark brown with concealed bars of rufous and black; wing-coverts like the back but with rufous tips; inner secondaries with black shafts and bars; rest of quills brown with rufous edges; tail brown, the outer feather edged with fawn-colour; eyebrow fawn-colour; ear-coverts rufous; under surface of body bright fawn-colour speckled with black on the throat and chest; axillaries and under wing-coverts fawn-colour.

Iris hazel; bill horn-colour; legs and feet pink.

Length 5·00; wing 3·00; tail 2·20; tarsus 1·00; culmen 0·55.

*Adult male in winter*.—Above, grey barred with rufous; crown

grey mottled with black; back of neck paler grey; wing-coverts margined with grey; inner secondaries dark brown edged with grey; remaining quills brown edged with rufous; tail-feathers dark brown tipped with white, the two centre feathers tinged with rufous and grey and crossed by broken bars of black; below reddish-buff, slightly spotted with dusky on the throat and chest.

*Adult female*.—Like the male in colour, but slightly smaller.

*Distribution*.—Cape Colony, where it is common in nearly all the western districts and as far to the east as Port Elizabeth, in the neighbourhood of which town it is not rare, but its range does not extend much further to the eastward. It is found also in Griqualand West and in Bechuanaland and has been recorded from Angola by Anchieta.

*Habits*.—Like all the *Mirafra* this species frequents not only the open country but also ground studded with clumps of bushes on which it readily perches if disturbed; sometimes, however, it runs along the ground for a long distance in front of an intruder, crouching at intervals until closely approached, then running on as before. Like other Larks it feeds on small seeds and insects.

Layard writes that this species "is well known from its singular habit of rising fifteen or thirty feet into the air, perpendicularly, making a sharp cracking sound with its wings as it rises, uttering a long shrill 'phew,' and then falling as abruptly to the earth. This action it will repeat at intervals of a minute or two, for an hour or more, chiefly during dull mornings, but in bright weather it commences before and after sunset. It delights in warm sandy soils; but we met with it on the high table-land of the Cold Bokkeveld in considerable abundance."

*Megalophonus* *clapper*  
124. **Mirafra rufipilea.** *Rufous-headed Lark.*

L'Alouette à calotte rousse, *Levaill, Ois. d'Afr.* iv. pl. 198 (1805).

*Alanda rufipilea*, *Vieill. N. Dict.* i, p. 345 (1816).

*Brachonyx pyrrhonota*, *Smithk, Ill. Zool. S. Afr. Birds*, pl. 110, fig. 2 (1847).

*Megalophonus rufipileus*, *Gray, Gen. B.* ii, p. 382 (1844); *Layard, B. S. Afr.* p. 211 (1867).

*Mirafra rufipilea*, *Sharpe, P. Z. S.* 1874, p. 641; *id. ed. Layard's B. S. Afr.* p. 517 (1884); *id. Cat. B. M.* xiii, p. 597 (1890); *Shelley, B. Afr.* i, p. 15 (1896).

*Description. Adult male*.—Above, reddish-brown, most of the feathers barred with black and tipped with white; mantle brighter

726 *Megalophonus adendorffi*  
*Adendorffi clapper Lark*

reddish; wing-coverts like the back; quills rufous for the basal two thirds, brown for the terminal third; two centre tail-feathers brown with reddish margins; rest of tail-feathers brown tipped with rufous, the outer feathers edged with buff; eyebrow and lores buff; ear-coverts rufous; cheeks and under surface fawn-coloured, the sides of neck speckled with brown, the front of neck and chest thickly marked with round black spots; under wing-coverts and inner margin of quills deep cinnamon-red.

Iris tawny-red; bill horn-coloured; legs and feet dusky.

Length 5·80; wing 3·35; tail 2·60; tarsus 1·00; culmen 0·60.

*Adult female*.—Resembles the male in plumage but is smaller.

*Young*.—Above, a deeper cinnamon-red waved with black bars; ear-coverts spotted with black; throat with faint bars of brown; flanks and thighs rufous mottled with brown; chest cinnamon with a few black dots.

*Distribution*.—North-eastern Cape Colony, the Orange Free State and the Transvaal, ranging as far north as the Zambesi where a specimen was obtained by Major Serpa Pinto.

*Habits*.—Mr. T. Ayres writes from the Transvaal: "This Lark has precisely the habits of *M. apiata*." "One of the birds sent (a male) had evidently, from the appearance of the skin on the breast and belly, taken his share in incubation; it was shot about the end of March." In the "Ibis" for 1880 he remarks: "This bird is called amongst the farmers the 'Rain-bird,' as they consider it a sign of rain when it rises during the breeding-season for some yards in the air with a fluttering flight, descending with a loud 'whew' when this action is often repeated; but it is very certain that the same habit prevails during a succession of dry weather; in fact it is one way in which the cock bird pays its addresses to the hen, and weather has very little to do with it."

## Genus VI. SPIZOCORYS.

*Type.*

**Spizocorys**, *Sundevall, Av. Meth. Tent.* p. 54 (1873)...*S. conirostris*.

Bill short, somewhat thick, higher than broad at the nostrils, conical; the culmen rounded and shorter than the middle toe and claw; the nostrils beset with bristles. The outer primary of the wing rudimentary, not exceeding the inner toe and claw in length, the distance between the tips of the secondaries and the tips of the primaries less than the length of the tarsus or hind claw.



The genus contains a single species which is resident in South Africa.

749

*conirostris*  
125. **Spizocorys conirostris.** *Pink-billed Lark.*

*Alauda conirostris*, Sundev. *Æfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 99; Gurney in Andersson's *B. Damara Land*, p. 192 (1872); Ayres, *Ibis*, 1874, p. 103, pl. iii, fig. 2; 1877, p. 345; 1878, p. 410; 1880, p. 104.

*Spizocorys conirostris*, Sundev. *Tent.* p. 55 (1872); Sharpe, *P. Z. S.* 1874, p. 631; *id. ed. Layard's B. S. Afr.* p. 508 (1884); *id. Cat. B. M.* xiii, p. 564 (1890); Shelley, *B. Afr. i*, p. 14 (1896).



*Spizocorys conirostris.*

*Description.* *Adult male.*—Above, brown streaked with black, the feathers of the back, rump and upper tail-coverts edged with grey; wing-coverts brown edged with buff; quills lighter brown margined with buff; tail-feathers blackish tipped with white, the two outer with buff; crown like the back; eyebrow and streak below eye white; ear-coverts brown; cheeks white spotted with black; throat white; rest of under surface pale rufous, the chest with triangular spots of dusky; axillaries and under wing-coverts buff.

Iris hazel; bill horn-colour; legs and feet flesh-colour.

Length, in flesh 5·60; of skin 4·80; wing 3·05; tail 1·80; tarsus 0·75; culmen 0·50.

*Adult female.*—Like the male in colour but slightly smaller.

*Young.*—Above, dark brown, most of the feathers with white

749<sup>3</sup> *S. C. - Damarensis Damara*  
*Pink-billed Lark*

tips ; sides of neck grey, of face brown ; a black streak over the ear-coverts ; under surface dull white, the breast tinged with brown, the throat and breast spotted with dusky.

*Distribution*.—The Transvaal, where it is not uncommon near Potchefstroom and in the Megaliesbergen, ranging across Bechuana-land to Great Namaqualand, Damaraland, and Ondongo.

*Habits*.—Andersson found this pretty little Lark “not un- common in Ondongo ;” “before the breeding-season they are seen in small flocks, but are less observable after they are paired.”

“A pair which I watched occupied about eight days in con- structing their nest and in the female bird laying her eggs, which I took on March 31, after they had been incubated about three days. The nest is formed in a hole excavated to the depth of about two and a half inches and thickly lined with decomposed grasses.”

Mr. T. Ayres met with this species near Potchefstroom, in the Transvaal, “feeding on the open flats amongst the short grass.” He found them in this locality both in June and November, during the latter month in pairs, so that they are probably resident. They feed on insects and grass-seeds.

## Genus VII. **TEPHROCORYS.**

*Type.*

**Tephrocorys**, Sharpe, *P.Z.S.* (1874), p. 633 .....*T. cinerea*.

Bill rather short and stout, equal in height and breadth at the nostrils, the culmen shorter than the middle toe and claw. The first primary rudimentary, not exceeding the inner toe and claw in length. Tail short, shorter than the wing.

The genus *Tephrocorys* contains four species ; three are confined to South Africa and Benguela, the fourth inhabits North-east Africa.

### *Key to the Species.*

*a.* Crown of a uniform rufous, unstreaked.

*a*<sup>1</sup>. Crown bright chestnut-red ..... *T. cinerea*, p. 222.

*b*<sup>1</sup>. Crown pale cinnamon-red..... *T. spleniata*, p. 223.

*b.* Crown rufous, striped with black..... *T. anderssoni*, p. 224.

126. **Tephrocorys cinerea.** *Red-capped Lark.*

*Alauda cinerea*, *Gmelin, Syst. Nat.* p. 798 (1788).

*La petite Alouette à tête rousse, Levaillant, Ois. d'Afr.* iv, p. 137, pl. 199 (1805).

*Megalophonus cinereus*, *Gray, Gen. B.* ii, p. 382 (1844); *Layard, B. S. Afr.* p. 212 (1867); *Ayres, Ibis*, 1869, p. 295, 1878, p. 410; *Gurney in Andersson's B. Damara Land*, p. 197 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 136 (1882).

*Tephrocorys cinerea*, *Sharpe, P. Z. S.* 1874, p. 633; *id. ed. Layard's B. S. Afr.* pp. 511, 851 (1884); *id. Cat. B. M.* xiii, p. 561 (1890); *Shelley, B. Afr.* i, p. 14 (1896).

"Inkelde Leeuwerk" of the Dutch.



*Tephrocorys cinerea.*

*Description.* *Adult male in winter.*—Above, ash-colour mottled with dark brown; crown bright chestnut-red, the nape paler than the back; wing-coverts brown edged with fawn-colour; quills dark-brown edged with reddish-brown, the outer with buff; tail-feathers dark brown, the outer web of the outermost and the edge of the next white; some feathers of forehead, a distinct eyebrow, lores, feathers below eye and cheeks white; ear-coverts reddish; sides of neck grey; under surface of body white, the centre of breast and sides tinged with fulvous, a patch of chestnut-red on each side of breast; edge of wing whitish; under wing-coverts grey.



Iris hazel ; bill black, the base brown ; feet dark brown.

Length 6·25 ; wing 3·60 ; tail 2·50 ; tarsus 0·85 ; culmen 0·55.

*Adult female*.—Resembles the male but is smaller.

Length 6·10 ; wing 3·35 ; tail 2·35.

*Adult male in summer*.—Much redder and brighter than in winter, the crown a brighter chestnut ; the crop tinged with reddish, the sides of the breast and body more extensively chestnut-red.

*Young*.—Above blackish-brown, the end of each feather tipped with pale buff ; nape grey mottled with brown ; below, whitish, the breast and sides mottled with brown and rufous ; wing-quills brown edged with rufous, the outer primary and inner secondaries with whitish.

*Distribution*.—Confined to South Africa : commonly, but at the same time locally distributed over Cape Colony, Natal, the Orange Free State and the Transvaal, ranging into Bechuana, Great Namaqua and Southern Damara Land. Very abundant in Upper Natal and the South Transvaal.

*Habits*.—During autumn and winter these Larks congregate in flocks of considerable size, in localities that are fairly open and free from bush, to feed on the ground on small seeds and insects. They run with speed, and owing to the manner in which their plumage assimilates to the colour of the soil are not easily detected on the ground. When feeding they constantly utter a low chirping note, invariably so as they take flight. Towards the end of August, in Cape Colony, the flocks break up and the birds pair and soon after commence to build their nests, sometimes in a natural hollow of the ground or the footprint of some animal, more often in a cavity scratched by the female on the sheltered side of a tuft of grass. The nest is cup-shaped, constructed of dry grass lined with finer grass, with occasionally a few hairs, rootlets and feathers added. Usually three, but sometimes only two eggs are laid, of a pale cream-colour marked all over, but more thickly in a zone, with spots and mottlings of purplish and umber-brown and grey. They average 0·78 × 0·62.

*namib*

127. ***Tephrocorys spleniata*.** *Damara Red-capped Lark.*

*Alauda spleniata*, Strickland, *Contrib. Orn.* 1852, p. 152.

*Megalophonus cinereus* (nec Gmelin) Gurney in Andersson's *B. Damara Land*, p. 197, pt. (1872).

*Tephrocorys spleniata*, Sharpe, ed. Layard's *B. S. Afr.* p. 51 (1884) ; *id. Cat. B. M.* xiii, p. 563 (1890) ; Shelley, *B. Afr.* i, p. 14 (1896).

*Description.* *Adult in winter.* — (From Cat. B. Museum). Similar to the winter plumage of *T. cinerea*, but very much paler everywhere, the rufous of the crown, the rump, wing-coverts and sides of chest being of a light cinnamon instead of deep ferruginous or chestnut.

Bill yellowish-brown; legs and toes brown (Andersson).

Length 5·80; wing 3·60; tail 2·10; tarsus 0·80; culmen 0·55.

*Distribution.*—Northern Damaraland and Benguela.

*Habits.*—Like those of *T. cinerea*.

### 128. *Tephrocorys anderssoni.* *Andersson's Lark.*

*Megalophonus anderssoni*, *Tristram, Ibis*, 1869, p. 434; 1870, p. 444; *Gurney, in Andersson's B. Damara Land*, p. 198 (1872).

*Tephrocorys anderssoni*, *Sharpe, Cat. B. M.* xiii, p. 564 (1890); *Shelley, B. Afr.* i, p. 14 (1896).

*Description.* *Adult.*—Like *T. cinerea*, but the sides of the breast and body, as well as the thighs and under tail-coverts, are bright rufous, and the outer web of the external tail-feather is buff-coloured.

Length 5·65; wing 3·50; tail 2·10; tarsus 0·80; culmen 0·55.

*Distribution.*—Damaraland, in the neighbourhood of Otjimbinque; "type" March 13, 1865 (C. J. Andersson).

*Habits.*—Canon Tristram makes the following remarks on this species in the "Ibis" for 1869, page 435; "*Megalophonus anderssoni* is nearly allied to *M. cinereus* in colouration, but differs in its proportions, and bears a relation to it similar to that which *M. africanoides* does to *M. africanus* and *M. chenianus* to *M. sabota*. The rufous colour, however, is continuous, and not interrupted as in *M. cinereus*, and the spots of brown-black on each side of the neck are very distinct."

"Mr. Andersson forwarded the nest and eggs along with the skin. The eggs are very sparsely spotted, for a Lark's, with russet on a greenish-white ground, and are smaller than those of any other South African Lark. In their pale and sparse colouration they resemble the eggs of *Certhilauda africana*."

This Lark is closely allied to *T. ruficeps* of Abyssinia and North-east Africa.

736 *Bona difficilis* Short-tailed Lark

Genus VIII. **OTOCORYS.***Type.*

**Otocoris**, Bonaparte, *Nuovi Ann. Sci. Nat. Bologna II.*,  
p. 407 (1838) ..... *O. alpestris*.

Bill moderately short, nearly conical, the upper mandible slightly arched and without a notch; gape straight; nostrils oval, basal, concealed by stiff feathers directed forwards; wings long, pointed, the outer quill obsolete, the second or third longest; tail rather long and slightly emarginate; tarsus and toes rather short; front claws slightly curved, the hind claw long, about as long as its toe, and nearly straight. Plumage: the adult male with an erectile tuft of narrow elongated feathers on each side of the head above the eye.

*Otocorys alpestris.*

The Horned Larks number about six species and twice as many sub-species and races. One species, *Otocorys alpestris*, the Shore Lark, inhabits the Arctic regions of both continents; the remaining species and sub-species are found on high plateaux or mountain ranges in Europe, Asia, Africa, and North and South America. A single specimen of a previously unknown species, supposed to have been received from South Africa, is in the museum at Frankfurt-am-Main and has been named *O. berlepschi* by Herr Hartert.

The Horned Larks frequent open country, run much on the ground, feed on seeds and insects, and build open cup-shaped nests of grass on the ground, in which they lay four or five greyish



eggs spotted with brown and dark grey. The cocks, as a rule have a lively song and mellow call-note. They frequently sing on the wing.

- 746 *Otocorys dopsis* *Berlepschi*  
 129. **Otocorys berlepschi.** *South African Horned Lark.*

*Otocorys berlepschi*, *Hartert, J. f. O.* 1890, p. 103; *Hartert, Ibis*, 1892, p. 523, pl. xiii.; *Shelley, B. Afr.* i, p. 14 (1896).

*Description.*—(*Hartert, "Ibis,"* 1892.) Top and sides of the head, chin, throat and upper breast black, with a faint purplish gloss; ear-coverts tipped with pale brown; occiput, hind neck, interscapular region, smaller upper wing-coverts and tail-coverts bright vinaceous cinnamon; outer and inner webs of all the quills brown, faintly margined and tipped with brownish grey; tail dark brown, central pair and outer webs of lateral rectrices paler brown; lower part bright vinaceous cinnamon, spotted with brown on the breast and whitish along the middle of the abdomen.

Total length about 6·5 inches; wing 4·15; tail 2·8; tarsus 0·8; culmen 0·46.

*Distribution.*—The specimen described above, the only one known, was found by Herr Ernst Hartert in the Senckenberg Museum at Frankfurt-am-Main. "A slip of paper was attached to the stand of the specimen with the words 'Alauda?—Caffraria.' This is a somewhat uncertain locality, but I think that it is most probable that the bird came from the interior of South Africa."—(*Hartert in "Ibis,"* 1892.)

#### Genus IX. **HETEROCORYS.**

*Type.*

**Heterocorys**, *Sharpe, P. Z. S.* 1874, p. 625.....*H. breviunguis*.

Of the general appearance of *Certhilauda*, and with a similar nostril, but resembling *Ammomanes* in its long tarsus and in the proportions of its bill; the hind claw very much curved, and shorter than the hind toe. This genus contains a single species with a range confined to South Africa.

733 130. **Heterocorys brevilinguis.** *Short-clawed Lark.*

*Alauda brevilinguis*, *Sund. Æfv. K. Vet.-Ak. Förh. Stock.* 1850, p. 99.  
*Heterocorys brevilinguis*, *Sharpe, ed. Layard's B. S. Afr.* p. 503 (1884);  
*id. Cat. B. M.* xiii, p. 524 (1890); *id. P. Z. S.* 1874, p. 626, pl. 76,  
 fig. 1; *Shelley, B. Afr.*, i, p. 14 (1896).



*Heterocorys brevilinguis.*

*Description. Adult male.*—Above, reddish-brown with broad streaks of black, the head slightly crested; wing-quills brown edged with reddish-brown; rump and upper tail-coverts more narrowly streaked than the back; tail-feathers brown edged with pale reddish-brown; lores and a wide eyebrow, sides of face, cheeks, and throat buffish-white; ear-coverts brown; the cheeks slightly spotted with brown; under surface whitish tinged with tawny on the breast and sides; the chest and sides of neck streaked with dark brown; under wing-coverts buff, the outer spotted with brown.

Iris brown; bill horn-colour; feet pale brown.

Length 7.00; wing 4.00; tail 3.10; tarsus 1.10; culmen 0.80.

*Distribution.*—Northern Cape Colony and the Transvaal.

*Habits.*—Of the habits of this Lark nothing has been recorded. Sir Andrew Smith procured two examples in South Africa, and Professor Wahlberg obtained others in the Transvaal. Since then no naturalist appears to have met with it.

Genus X. **ALÆMON.**

Type.

**Alæmon**, *Keyserling and Blasius, Wirbelth Eur.*, p. 36(1840) ..... *A. alaudipes*.

Bill elongated, curved, tapering, moderately strong; nostrils oval, placed in the anterior portion of the nasal membrane; wings long, the first quill not much longer than the coverts, the second shorter than the sixth, the third and fourth about equal and longest; tail moderately long, nearly even; tarsi long, rather slender; toes rather short, claws short and curved, the hind claw longer but curved.

The four species included in the genus *Alæmon* are natives of Africa. Two occur in South Africa.

The Curved or Long-billed Larks are inhabitants of open plains, barren karroos, and deserts; the South African species of grasslands and rocky hill-sides as well. These Larks seek for their food, consisting of insects and small seeds, on the ground. They run with extreme rapidity, and only occasionally perch on bushes. Their nests are cup-shaped, built on the ground in a slight depression of dry grass and occasionally a few hairs. Their eggs, from two to four in number, are whitish rather thinly spotted, and sometimes zoned, with purplish brown of two shades.

*Key to the Species.*

- a. Larger; wing 3·70 to 4·40; culmen 0·75 to 0·95; breast thinly marked with small spots *A. semitorquata*, p. 228.  
 b. Smaller; wing 3·30 to 3·60; culmen 0·65 to 0·75; breast marked with larger spots..... *A. nivosa*, p. 230.

*Certhilauda semitorquata*131. **Alæmon semitorquata.** Grey-collared Lark.

*Certhilauda semitorquata*, *Smith, Rep. Exp. Centr. Afr.* 1836, p. 47;  
*id. Ill. Zool. S. Afr.* pl. 106, fig. 2 (1846); *Layard, B. S. Afr.* p. 216  
 (1867); *Gurney in Andersson's B. Damara Land*, p. 201 (1872).

*Certhilauda subcoronata*, *Smith, Ill. Zool. S. Afr.* pl. 90, fig. 2 (1843);  
*Layard, B. S. Afr.* p. 217 (1867).

*Certhilauda coronata*, *Layard, Ibis*, 1869, p. 371.

*Alæmon semitorquata*, *Sharpe, P. Z. S.* 1874, p. 620; *id. ed. Layard's B. S. Afr.* p. 469 (1884); *id. Cat. B. M.* xiii, p. 521 (1890); *Shelley, B. Afr.* i, p. 14 (1896).

*Description.* Adult male in summer. — Above, bright brown streaked with black, darker on the crown, the hind neck with a tinge of grey; least wing-coverts more distinctly streaked; greater

7456 C - S - *daviesi* E. G. Longbill Lark  
 7480 C - S - *bradshawi* OR do  
 7422 C - S - *Damara* *Damara*



coverts with brown bases and rufous margins, quills ash-brown edged with rufous; tail-feathers brown edged with rufous; eyebrow and lores buff; ear-coverts rufous; cheeks and throat white with a few specks of black; rest of under surface white tinged with fulvous, the breast, sides and flanks streaked with black; under tail-coverts rufous streaked with dark brown; under wing-coverts isabelline-white.

Iris brown; bill yellowish; feet flesh-coloured.

Length 8·00; wing 4·10; tail 3·60; tarsus 1·15; culmen 0·90.



*Alæmon semitorquata.*

*Adult male in winter.*—Above, pale sandy-brown, the feathers edged with fulvous, the crown and upper back striped with black; hind-neck grey; lower back and rump unstreaked; wing-coverts and quills brown with lighter edges; ear-coverts sandy-brown; cheeks and throat white, unspotted; under surface white, the breast with a few triangular black spots.

*Adult female.*—Resembles the adult male in plumage, but is smaller, and has a much smaller bill.

Length 7·50; wing 3·75; tail 3·00; tarsus 1·05; culmen 0·75.

*Distribution.*—South Africa: Eastern and Northern Cape Colony to the Transvaal on the east, and through Great Namaqua and Damara Lands to Benguela on the west. In Cape Colony this

Lark is not very common near Grahamstown, but is more numerous, and resident, in the neighbourhoods of Colesberg and Hopetown, and thence throughout the valley of the Orange River. It is common in Little and Great Namaqua Land.

*Habits.*—This Lark frequents from choice somewhat arid plains, as well as stony hillsides and mountain tops. I have never met with more than a pair together. It runs much on the ground and with considerable speed, often stopping to crouch as if to avoid observation; when it does so it is by no means easily detected, so closely does its plumage harmonise with the colours of the ground. Its flight is undulating and seldom prolonged for any great distance. These Larks feed much on insects and especially upon beetles, but occasionally upon small grass and other seeds; their ordinary call-note is a clear and prolonged whistle, they also indulge occasionally in a short but cheerful song. Towards the end of August or beginning of September they proceed to nest. A slight cavity scratched in the ground under cover of a tuft of grass is lined with fine dry grass, and in it three eggs are laid about the end of September. These are cream-coloured, spotted all over, but more thickly in a ring round the widest part of the egg, with reddish and purplish-brown. They average  $0.90 \times 0.65$ .

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*Calendulauda*132. **Alæmon nivosus.** Karroo Lark.

*Certhilauda nivosus*, Swains., *B. W. Afr.* i, p. 213 (1837).

*Alauda codea*, Smith, *Ill. Zool. S. Afr. Aves*, pl. 87, fig. 1 (*winter plumage*) (1843); Layard, *B. S. Afr.* p. 209 (1867).

*Alauda lagepa*, Smith *Ill. Zool. S. Afr. Aves*, pl. 87, fig. 2 (1843) (*summer plumage*).

*Megalophonus guttatus*, Layard, *B. S. Afr.* p. 215 (1867).

*Megalophonus lagepa*, Layard, *B. S. Afr.* p. 214 (1867); Gurney in Andersson's *B. Damara Land*, p. 200 (1872).

*Alæmon nivosus*, Sharpe, *P. Z. S.* 1874, p. 623; *id. ed.* Layard's *B. S. Afr.* p. 501 (1884); *id. Cat. B. M.* xiii, p. 522 (1890); Shelley, *B. Afr.* i, p. 14 (1896).

*Description.* *Adult in summer.*—Above, cinnamon-brown streaked with black, the rump unstreaked; wings dark brown, the eathers edged with cinnamon; upper tail-coverts rufous streaked with black; tail-feathers dark brown edged with paler brown, the two centre feathers broadly; the two outer feathers narrowly edged with rufous; eyebrow and lores buff; in front of eye a dusky spot,

below the eye a streak of buff; ear-coverts cinnamon; cheeks and throat white with a few black spots; under surface buff-white, the sides tinged with rufous, the lower throat and breast thickly spotted with dark brown, the sides and flanks streaked; thighs rufous; under tail-coverts mixed white and rufous; under wing-coverts and under surface of quills ash-brown.

Iris hazel; bill light brown; feet yellowish-brown.

Length 7·20; wing 3·65; tail 3·80; tarsus 1·05; culmen 0·70.

*Adult in winter.*—Above, grey streaked with dusky; wing-coverts dark brown margined with whitish; quills dark brown edged with whitish; rump unstreaked; upper tail-coverts streaked with dark brown; tail dark brown, the two centre and the outermost feathers margined with brownish-white; eyebrow and streak below the eye white; in front of eye black; ear-coverts grey; fore parts of cheeks and throat white, with a line of black spots on each side; sides of neck and under surface of body white, the lower throat and chest spotted, the sides, flanks, and under tail-coverts streaked with blackish; the sides and thighs grey; under surface of wing ash-brown; bill and feet brownish-orange.

*Adult female.*—Resembles the male but is slightly smaller.

*Young.*—Resemble the adults in winter plumage, but are of a more sandy-brown with the feathers of the upper surface edged and tipped with white; below, dull white mottled with brown.

*Distribution.*—South Africa: in Cape Colony from Cape Town to the Orange River. Abundant in the Karroo and in Little Namaqua Land, but, according to Andersson, does not range to the north of the Orange River.

*Habits.*—Sir Andrew Smith, misled by the very distinct summer and winter plumage of this Lark, described it as two distinct species. He writes under the heading *Alauda codea*: “The specimens I observed were in localities thinly furnished with low brushwood, and they rarely failed, when they were disturbed in these situations, to fly to a distance and then perch upon the summit of some dwarf shrub, from whence they might ensure a view of any person who might follow them.”

Under the heading *Alauda lagepa* he remarks: “This species is thinly distributed between the Berg and Orange Rivers, close to the western coast, and specimens are usually found on sandy or Karroo plains, which are sparingly covered with brushwood. It whistles occasionally in the mornings, soars like a true Lark, and on descending from its aerial flights commonly perches on



the shrub nearest to the point where it descends. It consumes as food seeds and small insects."

Layard writes: "We found it plentiful at Nel's Poort, in the Karroo; it first appeared in the neighbourhood of Beaufort. A single nest fell under our observation in December. The eggs, four in number and of a mottled brown, were deposited in a cup-shaped nest, on the side of a low bush, at the edge of a foot path. When we approached it the bird crept away to a little distance, then rose, flew a few yards, and perched on an ant-heap to watch us."

### Genus XI. **CERTHILAUDA.**

*Type.*

**Certhilauda**, Swainson, *Zool. Journ.* iii, p. 344 (1827)...*C. capensis*.

Bill lengthened, slender, both mandibles equally curved, the culmen equal to or longer than the middle toe and claw; the nostrils basal, lateral, rounded and partly shut in by a membrane. Wings long, the outer quills short, equal to or slightly longer than the tarsus, the third, fourth and fifth nearly equal and longest. Tail moderately long, even. Tarsus slender, much longer than the middle toe; toes moderately long, the inner and outer equal, the middle-toe rather longer and slender, the hind-toe shorter; front claws moderately curved, hind-claw long, as long as its toe, and straight. The Long-billed Larks, two species in all, are confined to South Africa. They resemble members of the preceding genus *Alæmon* in their long and curved bill, but differ in having the hind-claw almost perfectly straight instead of curved.

The *Certhilauda* inhabit stony or sandy plains and deserts, but also grass-lands. They run with facility on the ground but sometimes perch on bushes. They feed chiefly on insects, occasionally on small seeds, build cup-shaped and rather flimsy nests in hollows of the ground and lay four or five whitish eggs, sparingly spotted and freckled with two or three shades of purplish-grey and brown.

#### *Key to the Species.*

- a.* Ends of tail-feathers unspotted..... *C. capensis*, p. 233.
- b.* Ends of tail-feathers spotted with white..... *C. rufula*, p. 234.

133. **Certhilauda capensis.** *Cape Long-billed Lark.*

*Alauda capensis*, *Bodd. Tabl. Pl. Enl.* p. 45 (1783).

*Alauda africana*, *Gm. Syst. Nat.* i, p. 798 (1788).

*L'Alouette sirli*, *Levaill. Ois. d'Afr.* iv, pl. 192 (1805).

*Certhilauda africana*, *Gray, Gen. B.* ii, p. 383 (1844); *Smith, Ill. Zool.*

*S. Afr. Aves*, pl. 90. fig. 1 (1849); *Layard, B. S. Afr.* p. 217 (1867).

*Certhilauda capensis*, *Gray, Handb. B.* ii, p. 120 (1870); *Sharpe,*

*P. Z. S.* 1874, p. 615; *id. ed. Layard's B. S. Afr.* p. 494 (1884); *id.*

*Cat B. M.* xiii, p. 514 (1890); *Shelley, B. Afr.* i, p. 13 (1896).



*Certhilauda capensis.*

*Description. Adult male.*—Above, brown streaked with darker brown, many feathers with white tips; back of neck tinged with grey; wing-coverts dark brown tipped with white; quills brown edged with buff, the inner secondaries with white; rump and upper tail-coverts reddish-grey streaked with brown; tail-feathers dark brown edged with fulvous, the outer edged and tipped with buff; crown like the back; eyebrow white; in front of eye dusky, below grey; ear-coverts brownish; cheeks white spotted with black; chin white; rest of under surface pale buff, the lower throat and chest marked with triangular spots of black; under tail-coverts white streaked with black; axillaries and under wing-coverts buff; edge of wing mottled brown and buff.

741. a - a - subcoronata Kanno Long-billed

Iris dark brown; bill brown; legs and feet yellowish.

Length 7.50; wing 3.90; tail 3.10; tarsus 1.12; culmen 1.00.

*Adult female*.—Resembles the male in plumage.

*Distribution*.—The greater part of Cape Colony and Natal. Common on the Cape Flats and in the Western districts of Cape Colony becoming rarer in Eastern Cape Colony and Natal.

*Habits*.—This species is almost invariably met with in pairs, never, so far as my observations go, in flocks. It frequents both sandy flats overgrown with brushwood and grassy plains and hilltops, and, although it spends most of its time in running along the ground, it not unfrequently perches on the tops of bushes, failing these, on ant-hills or hillocks. It feeds both on insects and small seeds. Its note is a loud, prolonged, and clear whistle.

In the neighbourhood of Cape Town these Larks breed during the months of September and October. A cup-shaped nest of dry grass, lined with finer grass and hairs, is constructed in a hollow scratched by the bird at the side of a stone or tuft of grass, sometimes under the edge of a low bush; in this three eggs are deposited. These vary a good deal in colour, but are usually pale bluish-white or dull white, more or less mottled and freckled with various shades of reddish and purplish-brown. They measure 0.90 × 0.67.

*Chersomanes albopascuala albopascuala*

737

134. **Certhilauda rufula.** *Rufous Long-billed Lark.*

*Cape Spike-billed*

*Anthus rufulus*, Vieill. N. Dict. d'Hist. Nat. xxvi, p. 494 (1818).

*Certhilauda garrula*, Smith, Ill. Zool. S. Afr., *Aves*, pl. 106, fig. 1 (1846); *Layard*, B. S. Afr. p. 216 (1867); *Ayres*, *Ibis*, 1869, p. 295, 1871, p. 268; *Sharpe*, P. Z. S. 1874, p. 618; *id. ed.* *Layard's B. S. Afr.*, p. 498 (1884).

*Certhilauda rufula*, *Sharpe*, Cat. Afr. B. p. 71 (1871); *Gurney* in *Andersson's B. Damara Land*, p. 201 (1872); *Sharpe*, P. Z. S., 1874, p. 618; *id. ed.* *Layard's B. S. Afr.* p. 496 (1884); *Ayres*, *Ibis*, 1880, p. 264; *Sharpe*, Cat. B. M. xiii, p. 515 (1890); *Shelley*, B. Afr. i, p. 13 (1896).

*Description*. *Adult male*.—Above, bright rufous streaked indistinctly with brown, many feathers edged with buff; wing-coverts brown edged with white; quills brownish, the secondaries with rufous margins, the primaries with white tips; rump and upper tail-coverts rufous; tail black, rufous towards the base, the two centre feathers rufous with brown centres and not spotted, the remaining feathers with a white spot at the end, the outermost

7376 C-a - *arenaria namaqua* Esch  
C Ca - *erikssoni* Damara do  
d Ca *Halabaris Halabaris*  
C-a - *namaquensis* Esch



edged with white externally; lores, eyebrow, and cheeks, buff; the cheeks spotted; throat white; under surface rufous, the breast with small brown spots; under wing-coverts rufous.

Iris dark hazel; bill dusky; legs and feet pale brown.

Length 6·10; wing 3·70; tail 2·60; tarsus 1·15; culmen 0·85.

*Adult female*.—Similar to the male in colour but smaller and with a smaller bill.

Length 5·55; wing 3·50; tail 2·15; tarsus 1·10; culmen 0·75.

*Young*.—The feathers of the upper surface spotted at the ends with white preceded by black; hind neck fulvous; wing-coverts margined with white; lores, small eyebrow and throat white; under surface of body pale rufous, the breast slightly spotted with brown.

*Distribution*.—Northern and Eastern Cape Colony; Great Namaqua Land; Natal, the Transvaal, the Orange Free State and Griqualand West, ranging into Southern Bechuanaland.

*Habits*.—Like the other long-billed Larks this species keeps much to the ground in rather open and stony localities. Here it runs with great swiftness and endeavours to escape detection by suddenly stopping and crouching on the ground in spots that assimilate in colour with its plumage, and this manœuvre is frequently successful. The flight of this Lark is undulating; its note is a loud and prolonged whistle. It feeds on a great variety of small insects and also on grass and other seeds picked up on the ground.

Mr. T. Ayres found this species breeding in the Transvaal; the nest "was placed under a tuft of grass, and was composed of rough grass outwardly, lined with roots of fine grass, and partially arched over with the rough grass of which the outer portion of the nest was constructed. It contained two eggs, one of which was larger than the other; and although I left the nest for two days after finding it, no other eggs were laid."

## Family VII. MOTACILLIDÆ.

This family includes the Long-claws, Pipits and Wagtails, birds which differ from one another considerably in plumage and style of colouration but which are structurally alike.

The bill is long and slender, the edges of both mandibles smooth with the exception of a notch near the tip of the upper; rictal

bristles moderately developed. Tarsus scutellated anteriorly, each side covered by an entire plate, the two forming a sharp ridge where they meet posteriorly. Wing with nine developed primaries, the first or outer being abortive, the second, third and fourth (the abortive outer being reckoned as the first) about equal and longest; the inner secondaries about as long as the primaries. Tail very variable in length, of twelve feathers. Sexes alike or not differing much in colour; the young nearly resembling the adults. Two moults in the year, one complete, one partial, or, in some instances, two complete moults. The Longclaws (*Macronyx*) are confined to Africa, but the Pipits (*Anthus*) and Wagtails (*Motacilla*) are distributed over the greater part of the globe, being most abundant in Europe, Asia and Africa. Many of the species are migratory. About seventy species are included in the family, of these nineteen occur in South Africa, five being annual migrants from Europe or Western Asia and the remaining fourteen resident.

All the species of *Motacillidæ* are chiefly insectivorous as regards their food, and the majority search for it on the ground, the Wagtails preferring the neighbourhood of water for this purpose. Many are fairly good songsters, but they differ widely in this respect. All lay spotted eggs in open nests usually built on the ground, occasionally in holes in banks or rocks or under stones.

#### Key to the Genera.

- a. Plumage more or less mottled.
  - a<sup>1</sup>. Outstretched feet reaching beyond the end of tail ..... *Macronyx*, p. 236.
  - b<sup>1</sup>. Outstretched feet not reaching the end of tail ..... *Anthus*, p. 242,
- b. Plumage plain and unmottled ..... *Motacilla*, p. 253.

#### Genus I. **MACRONYX.**

*Type.*

**Macronyx**, Swains. *Zool. Jour.* iii, p. 344 (1817) ..... *M. capensis*.

Bill moderate, straight; the culmen slightly arched and equal in length to the hind toe. Nostrils naked, large, the aperture oblong. Rictal bristles well developed, reaching beyond the nostrils. Wings rather short, the four first quills equal and longest. Tail rather short and slightly rounded. Tarsus long and strong. Feet very large, the hind toe with its claw exceeding

the tarsus in length; the outstretched feet reaching beyond the end of tail. The hind claw very long and slightly curved, usually exceeding its toe in length. Plumage: below, orange, lemon-yellow or pink with a black gorget; above, brown streaked with darker brown or dusky. Sexes alike.

This genus contains four African species. In their habits they resemble the true Pipits and Larks. They spend most of their time on the ground, searching for insects and small seeds, but if alarmed usually perch on bushes. They build cup-



*Macronyx croceus.*

shaped nests of dry grass on the ground, and lay from three to five large speckled eggs which resemble in colour those of the Pipits. In his "Dictionary of Birds," Professor Newton has drawn attention to the curious resemblance in colour between the species of this genus and those of the genus *Sturnella*, a group of American birds belonging to the very distinct family of the *Icteridæ*. Although placed in distinct families by systematists, the species of the two genera resemble one another in their general habits, and both are popularly known as "Larks" in their respective habitats.



*Key to the Species.*

- a. Throat bright orange-red, contrasting with the orange-yellow of the breast and abdomen ..... *M. capensis*, p. 2  
 b. Throat bright yellow, similar to the breast and abdomen *M. croceus*, p. 239.  
 c. Throat and centre of breast and abdomen bright pink... *M. ameliæ*, p. 240.

719 135. **Macronyx capensis.** *Cape Orange-throated Long-claw.*

*Alauda capensis*, Linn, *Syst. Nat.* i, p. 288 (1766).

L'Alouette Sentinelle, *Levaill. Ois. d'Afr.* iv, p. 132, pl. 195 (1805).

*Anthus capensis*, Gray, *Gen. B.* i, p. 206 (1847); *Layard, B. S. Afr.* p. 121 (1867).

*Macronyx capensis*, *Bp. Consp.* i, p. 247 (1850); *Holub and Pelzeln, Orn. Südafr.* p. 86 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 530 (1884); *id. Cat. B. M.* x, p. 623 (1885); *Shelley, B. Afr.* i, p. 13 (1896).

"Kalkoentje" (Little Turkey) of the Dutch.

"Cape Lark" and "Cut-throat Lark" of the English.

*Description.* *Adult male in summer.*—Above, brown, the feathers centred with darker brown; wing-coverts and quills dark brown edged with paler brown, the least-coverts with orange, the primaries with yellow, the outer web of outer primary white; tail-feathers brown, all but the two centre ones tipped with white, the outer feathers most strongly, the outer web of the outermost white; crown like the back; eyebrow orange; lores and eye-ring yellow; ear-coverts brown; throat bright orange-red contrasting with the orange-yellow of the breast and abdomen; sides, flanks and thighs shaded with greyish-brown: under tail-coverts buff-yellow; a black band separates the throat from the chest and extends on each side across the neck to the base of the bill; axillaries and under wing-coverts orange.

Iris brown; bill dark brown; legs and feet pale brown.

Length 8.00; wing 3.85; tail 3.30; tarsus 1.30; culmen 0.65.

*Adult female.*—Slightly smaller and with a narrower black throat-band.

In winter both sexes are darker and more distinctly mottled.

*Young.*—Darker than the adults; the throat dull yellowish and the black throat-band represented by a few black spots.

*Distribution.*—Over the greater portion of Cape Colony, the higher "veldt region" of Natal, the Orange Free State, and the Transvaal, ranging into Matabili and Mashonaland. Rare in the Karroo.

*Habits.*—The well known “Cut-throat Lark” is, in the Colony, found most abundantly on grassy plains that are dotted over with clumps of bushes or low trees, for notwithstanding their long hind-claws, these Pipits usually seek refuge on the tops of trees or bushes when alarmed. They fly rather slowly but with rapid beats of their wings, uttering as they go what Layard aptly calls a “mewing” note that reminds one of the cry of a kitten. During the breeding season the males sing a few bars in a curiously hurried manner as they hover over their sitting mates. These Pipits appear to remain in pairs all the year round and never to congregate in flocks although for a few weeks in autumn the newly flown young remain with their parents. They feed principally on insects, such as small beetles, grasshoppers, termites, and various larvæ; occasionally they take a few grass- and other small seeds. The nest is artfully concealed in a hollow under the grass, and is a cup-shaped structure built of dry grass and root fibres. The eggs, laid in October or November, are from three to five in number, cream-coloured, closely spotted and speckled with various shades of brown and purple. They average  $1.05 \times 0.77$ .

136. **Macronyx croceus.** *Yellow-throated Long-claw.*

*Alauda crocea*, Vieill. *N. Dict.* i, p. 365 (1816).

*Macronyx flavigaster*, Swains. *B. W. Afr.* i, p. 215 (1837); *Jard. and Selby, Ill. Orn.*, new series, i, pl. 22 (1838).

*Anthus flavigaster*, Gray, *Gen. B.* i, p. 206 (1848); *Layard, B. S. Afr.* p. 121 (1867).

*Macronyx croceus*, Hartl. *Beitr. Orn. W.-Afr.* p. 23 (1844); *Sharpe, Cat. B. M.* x, p. 626 (1885); *Shelley, B. Afr.* i, p. 13 (1896).

*Macronyx striolatus*, Heugl. *Jour. f. Orn.* 1863, p. 164; *Sharpe, ed. Layard's B. S. Afr.* p. 532 (1884).

“Cut-throat Lark” of Natal Colonists.

“Kalkoentje” (Little Turkey) of the Dutch.

*Description. Adult male in summer.*—Above, pale brown, the feathers centred with black; wing-coverts like the back; quills dark brown, the primaries edged externally with yellow, the secondaries with light fulvous; tail-feathers blackish-brown, all but the two centre ones tipped with white the amount of which increases towards the outermost which has the outer web entirely white; crown like the back; eyebrow yellow; ear-coverts brown; cheeks, throat, breast and abdomen lemon-yellow, the throat

divided from the breast by a black gorget, which extends up the sides of the neck to terminate on each side below the eye; sides of breast and flanks tinged and streaked with brown; edge of wing bright yellow; axillaries, under wing-coverts, thighs and under tail-coverts yellow.

Iris reddish-brown; bill dark brown; legs and feet pale brown.

Length 8.50; wing 3.85; tail 3.25; tarsus 1.40; culmen 0.75.

In winter the plumage is darker and more mottled above.

*Adult female*.—Resemble the male in plumage but is slightly smaller.

*Distribution*.—This species of Long-claw ranges over the greater part of Africa to the south of the Sahara and extends as far south as Natal, but is rarely found in Cape Colony. It is the commonest Long-claw in the lower parts of Natal, Zululand and the Transvaal, but on the "high veldt" its place is taken by *M. capensis*. At Pinetown, in Natal, both species occur, but the present species is by far the commoner, as it also is, according to Mr. F. A. Barratt, from Bloemfontein to Pretoria and thence to Rustenberg. It was not noticed by Andersson in Great Namaqua or Damara Land but has been collected by Anchieta in Mossamedes and Angola.

*Habits*.—This Long-claw does not appear to differ in any of its habits from *M. capensis*, and in localities where the two species occur together I have in vain tried to detect any peculiarity, apart from colour, by which they might be distinguished. Their call-notes are, to my ear, exactly the same, and their eggs are exactly similar.

*Call-note*

718 . 137. **Macronyx ameliæ.** *Pink-throated Long-claw.*

*Macronyx ameliæ*, De Tarragon, *Rev. Zool.* 1845, p. 452; Gray, *Gen. B.* i, pl. 54 (1848); Holub and Pelzeln, *Orn. Südaf.* p. 87 (1882); Sharpe, ed. Layard's *B. S. Afr.* p. 533 (1884); *id.* *Cat. B. M.* x, p. 628 (1885); Shelley, *B. Afr.* i, p. 13 (1896).

*Anthus ameliæ*, Gray, *Gen. B.* i, p. 206 (1848); Layard, *B. S. Afr.* p. 124 (1867).

*Description. Adult male in summer*.—Above, buff-brown, the feathers centred with black; lesser wing-coverts dusky edged with white; rest of coverts dusky edged with buff; quills brownish-black edged with buff; tail-feathers brownish-black, except the outermost which is white, all but the four centre ones tipped with white



which increases in amount towards the outermost; crown like the back; lores and eyebrow white; ear-coverts buff-brown; under surface of body pink, tinged and streaked with brownish on the sides, flanks, and under tail-coverts; a black band originates on each side below the ear-coverts, and crosses the sides of the neck and upper chest; edge of wing and under wing-coverts pink.

Iris brown; upper mandible dark brown, the lower paler; legs and feet yellowish.

Length 7·60; wing 3·50; tail 3·25; tarsus 1·25; culmen 0·65.

*Adult female*.—Slightly smaller than the male but not differing in colour.

*Young*.—The black pectoral band of the adults is represented by a row of black spots on a band of buffish-brown.

*Macronyx wintoni*, Sharpe ("Ibis," 1891, pp. 444, 589), first described from a specimen obtained at Kavirondo, in Central East Africa, by Mr. F. J. Jackson; and since procured by Mr. Boyd Alexander on the Zambesi, and which was probably the bird obtained by Dr. Bradshaw at Pandamatenka, is a small race of *M. amelia*.

"Like *M. amelia*, but altogether smaller, the bill especially so." (Sharpe).

Irides brown; feet light brown.

Length 7·20; wing 3·55; tail 2·90; tarsus 1·20; culmen 0·50.

*Distribution*.—The larger race, *M. amelia typicus*, appears to be confined to the coast of Natal, Zululand and the south of Portuguese East Africa, the smaller *M. amelia wintoni* to the interior from Pandamatenka to Central East Africa.

*Habits*.—On the flat and swampy grass-lands bordering on the coast of Natal this brilliantly coloured Pipit is by no means uncommon and from its habit of perching on ant-heaps and other slightly elevated spots where its bright pink throat and chest are easily visible it is not readily overlooked. Like its congeners it has a "mewing" call-note, usually uttered as it flies from one perch to another; in spring the male in addition has a short hurried song uttered as he hovers for a few seconds in the air. This Pipit feeds on grass- and other small seeds, to a larger extent on various insects, small grasshoppers, young locusts, beetles and termites. A nest, containing four eggs, found near Durban in November, was built in a hollow at the foot of an ant-hill. It was deeply cup-shaped, constructed of grass stems, lined with finer grass and a few horsehairs. The eggs resemble those of *M. capensis* and *M. croceus* in colour but are somewhat smaller, averaging  $0\cdot95 \times 0\cdot70$ .

eggs greenish with  
red dots on surface  
nests in pans, a deep  
cup-shaped, made of  
grass & roots  
a few sticks long 3  
5000

Genus II. **ANTHUS.***Type.***Anthus**, *Bechst. Nat. Deuts.* iii, p. 704 (1807).....*A. trivialis*.

Bill straight, slender, compressed towards the point, the culmen swollen between the centre and tip; nostrils basal, lateral, in a short broad groove, and partly covered with membrane. Wing with nine primaries. Tarsus elongated, scutellated anteriorly, covered with two entire longitudinal plates posteriorly. Tail of twelve feathers, emarginated and shorter than the wing. Plumage above mottled. Sexes always alike. Young much spotted below, more so than the adults. A complete autumn and partial spring moult in some species, two complete annual moults in others.

*Anthus arboreus.*

About thirty species of Pipits have been described from all parts of the globe. One half the number are found in Africa, and nine species and subspecies occur to the south of the Zambesi and Cunéné Rivers, one being an annual migrant from Europe.

Pipits are birds of, usually, unassuming brown plumage, and Lark-like demeanour and habits. The majority of the species frequent the ground in search of insects and small seeds, some,

however, including the type of the genus, habitually perch on trees. They have a chirping call-note, and some of them a fairly melodious song. All build open cup-shaped nests on the ground and lay spotted eggs that resemble, more or less, those of the Wagtails and Larks.

From the Larks, which they superficially resemble in colour and in many of their habits, the Pipits are distinguished by having the posterior aspect of the tarsus covered by two complete longitudinal plates, whereas in the former the tarsus is scutellated both anteriorly and posteriorly.

*Key to the Species (after Sharpe).*

- a. Hind claw shorter than the hind toe.
  - a<sup>1</sup>. Axillaries and under wing-coverts yellow-olive.
    - a<sup>2</sup>. The feathers of the wing-coverts and back with dark centres.
      - a<sup>3</sup>. Smaller: wing 3·25; with a yellow patch in the centre of breast ..... *A. chloris*, p. 243.
      - b<sup>3</sup>. Larger: wing 3·50: without a yellow patch on the breast ..... *A. lineiventris*, p. 245.
    - b<sup>2</sup>. The feathers of the wing-coverts and back uniform and without dark centres..... *A. crenatus*, p. 245.
  - b<sup>1</sup>. Axillaries and under wing-coverts not yellow-olive but pale tawny-buff or dusky-brown.
    - c<sup>2</sup>. Breast and flanks streaked with black.
      - c<sup>3</sup>. Middle and greater wing-coverts tipped with white ..... *A. trivialis*, p. 247.
      - d<sup>3</sup>. No white tips to wing-coverts..... *A. brachyurus*, p. 248.
    - d<sup>2</sup>. Flanks uniform, unstreaked.
      - e<sup>2</sup>. Feathers of wing-coverts and back with dusky centres ..... *A. nicholsoni*, p. 249.
      - f<sup>2</sup>. Feathers of wing-coverts and back uniform ..... *A. pyrrhonotus*, p. 250.
- b. Hind claw equal to or exceeding the hind-toe in length.
  - e<sup>1</sup>. Feathers of the upper surface clear brown, with blackish centres ..... *A. rufulus*, p. 251.
  - f<sup>1</sup>. Feathers of the upper surface paler ash-brown with darker centres ..... *A. bocagii*, p. 252.

138. *Anthus chloris* *Small Yellow-tufted Pipit.*

*Anthus chloris*, *Licht. Verz. Samml. Kaffernl.* p. 13 (1842); *Sharpe, ed. Layard's B. S. Afr.* i, p. 541 (1884); *id. Cat. B. M.* x, p. 539 (1885); *Shelley, B. Afr.* i, p. 12 (1896).



*Anthus butleri*, *Shelley*, *P. Z. S.*, 1882, p. 336. pl. 18; *Butler, Feilden and Reid*, *Zoologist*, 1882, p. 336.

*Description.* *Adult male.*—Above, feathers of crown and upper surface of body dark brown edged with buff; wings dark brown, the outer primary edged with white, the other quills and coverts with olive-yellow or buff; tail-feathers dark brown edged with buff, the outermost with the outer web and tip white, the next tipped with white; lores, eyebrow and eye-ring white; ear-coverts white streaked with brown; cheeks buff; throat whitish; breast buffish at the sides, pale yellow in the centre, with narrow shaft-streaks of brown; sides of body buff streaked with dark brown; abdomen whitish; under tail-coverts fulvous streaked with dark brown; edge of wing and axillaries pale olive-yellow; under wing-coverts dark brown edged with white.

Iris brown; bill pale brown; legs and feet yellowish-brown.

Length 6·75; wing 3·25; tail 2·75; tarsus 0·95; culmen 0·60.

*Adult female.*—Resembles the male in plumage.

*Distribution.*—From Eastern Cape Colony through the Orange Free State and Upper Natal into Zululand and the South-eastern Transvaal. Resident throughout its range, and very common on the higher veldts of Natal and the Southern Transvaal.

*Habits.*—The following account of this Pipit is from an essay on the Birds of Natal by Major Butler and Feilden and Capt. Reid, in the *Zoologist* for 1882, p. 336, under the heading *A. butleri* (Shelley). "Feilden shot the first specimen on June 6, and Reid met with it at the Ingagane River in July, and obtained three specimens. Butler afterwards obtained a fine male, nearly in full plumage on November 9, at Newcastle, where it was by no means common. Those obtained at the Ingagane were very local, and only to be found on one particular open flat near the main drift." In their movements and flight they much resemble Wagtails. Butler "also notes that it is a bird of skulking habits, seeking concealment in the grass much more than the other Pipits, especially when pursued, lying close, and being consequently often difficult to flush a second time."

I met with this Pipit in numbers on the veldt near Nottingham Road, in Natal, in October and November, 1893. They were in pairs but had apparently not commenced nesting. A male had its stomach filled with the remains of mantides and small beetles. At this season the cocks were frequently to be heard singing from the tops of ant-hills, or occasionally as they flew from one resting

place to another. Their notes reminded me of those of the English Meadow Pipit. They resemble the latter bird also in their habit of creeping through the grass and running quickly across the more open spaces.

*Cynaideum Large*  
139. **Anthus lineiventris.** *Stripe-bellied Pipit.*

*Anthus lineiventris*, *Sundev. Œfv. K. Vet.-Ak. Förh. Stockh.* 1850, p. 100; *Sharpe, ed. Layard's B. S. Afr.* pp. 540, 852 (1884); *id. Cat. B. M.* x, p. 540 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

*Description. Adult male.*—Above, brown, the feathers edged with paler brown; crown pale brown, the feathers with dark brown centres; wings dark brown, the coverts tinged with olive-yellow and edged with fulvous, the quills with olive-yellow; tail-feathers dark brown edged with lighter brown, the outer feather with a large white patch on the inner web and at the base of outer web, the next white at the tip of inner web, the third with a smaller white spot; feathers before eye dusky; lores white; eyebrow and ring round eye yellowish; ear-coverts brown, cheeks white spotted with dark brown; under surface dull white, the lower throat with small triangular spots of blackish which become streaks on the breast and sides; thighs brown; under tail-coverts white streaked with brown; axillaries and under wing-coverts olive-yellow.

Iris brown; upper mandible blackish, the lower yellowish; legs and feet yellowish.

Length 7.45; wing 3.50; tail 2.90; tarsus 1.10; culmen 0.65.

*Adult female.*—Resembles the adult male in plumage.

*Distribution.*—From Natal through the Transvaal and Bechuanaland to Angola.

*Habits.*—Of this rare Pipit, Mr. T. Ayres writes in the "Ibis" for 1880, p. 104, "Female, Rustenburg, July 29." "The stomach of the specimen sent contained grasshoppers and other insects; it is a very uncommon species, frequenting rocky hill-sides, especially where a stream issues from the rock."

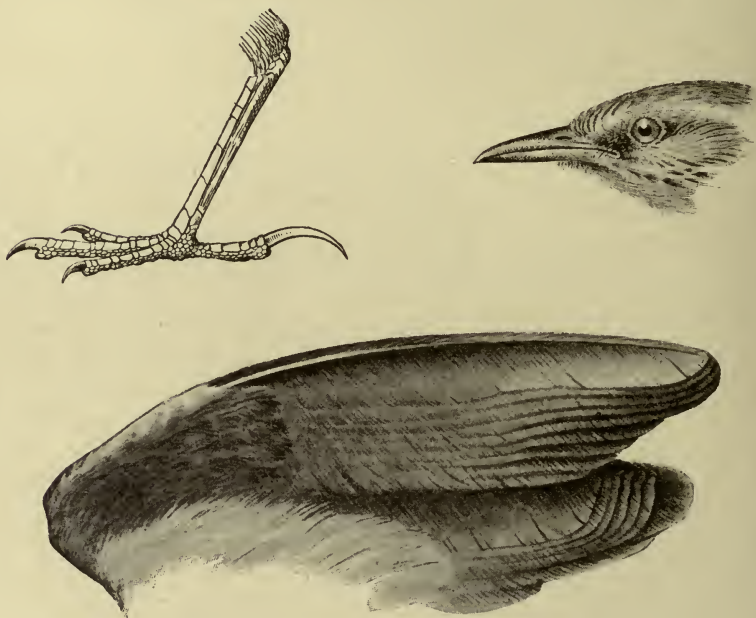
*Petrantus African Rock*  
140. **Anthus crenatus.** *Larger Yellow-tufted Pipit.*

*Anthus crenatus*, *Finsch and Hartlaub, Vög. Ost-Afr.* p. 275 (1870); *Sharpe, ed. Layard's B. S. Afr.* p. 543 (1884); *id. Cat. B. M.* x, p. 541 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

*Anthus lineiventris*, *Layard, B. S. Afr.* p. 123 (1867).

*Description. Adult male.* (Cape Flats, August 12, 1897).—Crown and upper surface of body, as well as the wing, brown, the

feathers with paler edges, the wing-coverts, primaries and outer secondaries edged with greenish-yellow ; tail-feathers dark brown tinged with greenish-yellow towards the base, the outer feather edged externally with fulvous and tipped with white, the next tipped with white only ; eye-ring, eyebrow, cheeks and throat whitish ; a streak through the eye dusky ; ear-coverts rufous streaked with white ; under surface of body fulvous, the chest and sides narrowly streaked with rufous ; edge of wing and axillaries olive-yellow ; under wing-coverts olive-brown.



*Anthus crenatus.*

Iris hazel ; upper mandible brown, the lower yellowish ; legs and feet flesh colour.

Length, in flesh, 7·20 ; of skin 6·80 ; wing 3·45 ; tail 2·60 ; tarsus 1·00 ; culmen 0·68.

*Distribution.*—This rare Pipit was obtained by Layard near Cape Town ; a second example was collected by Andersson in the same neighbourhood, and a third, the one described, by myself on the Cape Flats. Mr. T. C. Atmore shot a male at Burghersdorp



and a female at Colesberg. These are apparently the only examples recorded.

*Habits*.—The male described attracted my attention by its song, uttered whilst hovering in the air. Its stomach contained a spider, three small grasshoppers and a few grass-seeds.

*Spizola European*

141. **Anthus trivialis.** *Tree Pipit.*

*Alauda trivialis*, Linn. *Syst. Nat.* i, p. 288 (1766).

*Alauda arborea*, Gm. *Syst. Nat.* i, p. 793 (1788).

*Anthus arboreus*, Bechst. *Naturg. Deutschl.* iii, p. 706 (1806); Gray, *Gen. B.* i, p. 206 (1848).

*Anthus trivialis*, Fleming, *Brit. An.* p. 75 (1828); Dresser, *B. Europe*, iii, p. 309, pl. 132, fig. 2 (1875); Sharpe, ed. *Layard's B. S. Afr.* p. 852 (1884); *id.* *Cat. B. M.* x, p. 543 (1885); Shelley, *B. Afr.* i, p. 12 (1896).

*Description.* *Adult male in summer*.—Above, sandy brown streaked with dark brown; wing-coverts and secondaries dark brown edged with whitish, the middle and greater coverts tipped with whitish; primaries dusky brown with paler edges, the outer edged with white; outer tail-feather white, the outer web tipped, the inner marked with brown; rest of tail-feathers brown, the centre pair edged with whitish-brown, the penultimate with a white spot at the end of the inner web; lores, eyebrow, eyelids, ear-coverts and cheeks buff; malar line blackish; chin white; rest of lower surface buff, the abdomen lighter, the lower throat, breast and flanks streaked with dark brown; axillaries and under wing-coverts buff mottled with dusky near the edge of wing.

Iris dark brown; upper mandible dark brown, the lower paler; legs and feet pale flesh-colour.

Length 6·00; wing 3·40; tail 2·60; tarsus 0·90; culmen 0·50.

*Adult female*.—Slightly smaller and less distinctly spotted on the breast.

*Young*.—The breast-streaks are smaller but more numerous.

*Adults in winter*.—Deeper buff below, the light margins on the wing-coverts and quills broader than in summer.

*Distribution*.—Breeds in Northern and Central Europe and in Western Siberia, migrates in autumn to India and Africa, a few individuals ranging as far south as the Transvaal, where it was first obtained by Wahlberg on the Limpopo River.

*Habits*.—In its northern migration this species reaches its

breeding quarters in Europe towards the end of March or beginning of April, and departs again for the south in September and October. During the breeding-season the male is fond of uttering his Canary-like song from the top of a tree or while hovering in the air over his perch. This Pipit feeds on insects and small seeds. Its nest, placed on the ground, often amongst the herbage of a steep bank, is cup shaped, built of dry grass, moss and rootlets, lined with finer grass and hair. The eggs, from four to six in number, vary greatly in colour; some are reddish-brown spotted and dotted over with deeper reddish-brown; others greyish-white spotted and mottled with dark brown; whilst others are streaked with purplish-black. They average  $0.80 \times 0.60$ .

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*Aganthus*142. **Anthus brachyurus.** *Short-tailed Pipit.*

*Anthus brachyurus*, Sundevall, *Cefvers*, Stockholm, 1850, p. 100; *Layard's B. S. Afr.* p. 122 (1867); *Sharpe, ed. Layard's B. S. Afr.* pp. 530, 852 (1884); *id. Cat. B. M.* x, p. 551 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

*Anthus calthropæ*, *Layard, B. S. Afr.* p. 121 (1867).

*Description.* *Adult male in summer.*—Above, dark brown, the feathers with paler edges; lesser wing-coverts brown, the middle and greater darker brown edged with buff; quills dark brown edged with olive, the outer edge of the outer primary white; tail-feathers dark brown edged with light brown, the two outer with dull white; crown-feathers dark brown with fulvous edges; lores, eyelids, ear-coverts and cheeks buff, the ear-coverts streaked, the cheeks spotted, with brown; lower surface of body white, the throat and chest tinged with buff, the lower throat spotted, the chest streaked, with blackish; thighs fulvous; under tail-coverts buff centred with dark brown; axillaries yellowish; under wing-coverts buff; under surface of quills dusky, their inner margins broadly grey.

Iris hazel; upper mandible brown, the lower paler; legs and feet pale brown.

Length 4.75; wing 2.60; tail 1.65; tarsus 0.65; culmen 0.45.

*Adult female.*—Differs from the male in being olive-yellow on the sides of neck and chest.

*Young.*—Above, rufous-brown streaked with black, the rump unstreaked; the wing and tail-feathers with rufous margins.

*Distribution.*—Natal in summer; the Southern and Eastern

Transvaal in winter, and probably in summer as well, as it is recorded from Rustenburg, by Lucas, both in November and April. This species is, in Natal, "only plentiful during the summer months" according to Ayres.

*Habits*.—Mr. Ayres writes: "It is quite a terrestrial bird, never, to my knowledge, alighting on any twig or stem of grass, but always on the ground. The birds generally rise from the grass close to one's feet, and it is no easy matter to shoot them, as their flight is both strong and very eccentric. They build their nests (I am tolerably sure) similarly to the Larks on the ground, with a few loose dry leaves of grass; they are generally either single or in pairs."

These Pipits feed on small insects and grass seeds; their ordinary note is a shrill "chirrup." In spring the male frequently utters a short but by no means unpleasant song from an ant-hill or some slight elevation. In the Transvaal, according to Lucas, they sometimes perch on trees; this habit I have not myself noticed in Natal.

*Anoma lamellus*

143. **Anthus nicholsoni.** *Nicholson's Pipit.*

*Anthus nicholsoni*, Sharpe, ed. *Layard's B. S. Afr.* p. 536 (1884); *id.* *Cat. B. M.* x, p. 553 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

*Anthus campestris* (nec Vieill.) Gurney in Andersson's *B. Damara Land*, p. 114 (1872); *Bocage, Orn. Angola*, p. 292 (1881).

*Description.* *Adult male in winter.*—Above, brown with narrow streaks of black, the rump feathers and upper tail-coverts with rufous edges; tail-feathers dusky brown, the outer web and terminal third of the inner web of the outer feather dull white; the outer edge and tip of the next feather whitish; lesser wing-coverts like the back; rest of wing-coverts and quills blackish edged with brown and rufous, the inner margin of the outer primary white; crown brown mottled with black; lores, eyebrow and eyelids yellowish; ear-coverts rufous with white shafts; cheeks buff; moustache black; throat white; sides of neck and under surface of body buff, of a deeper shade on the sides, thighs and under tail-coverts, the lower throat spotted, the sides streaked, with dusky brown; axillaries and under wing-coverts pale buff.

Iris dark hazel; bill brown; feet pale brown.

Length 7.65; wing 3.90; tail 3.15; tarsus 1.05; culmen 0.70.

718 a *Q. r. rufass*



*Adult male in summer.*—Above, rufous-brown streaked with black, otherwise as in winter.

*Distribution.*—Cape Colony; Cape Town (May; King-Williamstown (May); Eland's Post (June); Natal, and The Transvaal; extending to Damara Land and Angola.

710 *Meganthus leucophrys*  
144. **Anthus pyrrhonotus.** *Cinnamon-backed Pipit.*  
*Cape Plain*

L'Alouette à dos roux, *Levaill. Ois. d'Afr.* iv, pl. 197 (1805).

*Alauda pyrrhonota*, *Vieill. Nouv. Dict.* i, p. 361 (1816).

*Anthus leucophrys*, *Gray, Gen. B.* i, p. 206 (1847); *Layard, B. S. Afr.* p. 122 (1867).

*Megalophonus pyrrhonotus*, *Layard's B. S. Afr.* p. 211 (1867).

*Anthus pyrrhonotus*, *Gurney, in Andersson's B. Damara Land*, p. 118 (1872); *Butler, Feilden and Reid, Zool.* 1882, p. 336; *Sharpe, ed. Layard's B. S. Afr.* p. 537 (1884); *id. Cat. B. M.* x, p. 555 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

"Enkelde Leeuwerk" of the Dutch.

*Description. Adult male in summer.*—Above, brown, the lesser wing-coverts like the back; remaining coverts blackish edged with buff; quills dusky brown edged with fulvous; tail-feathers dark brown edged with grey, the tips of the outer pair and the outer web of the outermost dull white; crown like the back; lores, eyebrow and feathers below eye whitish, ear-coverts buff-brown; cheeks whitish bounded above and below by a dusky streak; throat dull white; rest of under surface buff, lighter in the centre of body and on the under tail-coverts, the chest slightly streaked with dusky; axillaries and under wing-coverts brown.

Iris hazel; bill dusky; legs and feet dark flesh-colour.

Length 6.60; wing 3.65; tail 2.35; tarsus 1.10; culmen 0.65.

*Adult female.*—Resembles the adult male, but is a little smaller.

*Adult in winter.*—Above, a greyer brown, the edges of the wing-coverts and quills more distinct, the breast less streaked.

*Distribution.*—This, the commonest species of Pipit in South Africa, ranges over the greater portion of Cape Colony, excluding the forest districts of the south, and is particularly abundant on the veldt country of Upper Natal and the Orange Free State. In the Transvaal, says Mr. Ayres, "it is distributed during the winter months over the whole country, but more plentifully on high bare land than in the bush or along the Limpopo." It extends northward throughout Matabili and Mashonaland to the Zambesi, and thence to Abyssinia. On the west coast this species

711 *M. vaalensis vaalensis*

*Greater Plain Backed Pipit*

7113 *M. v. davisii* *Perth*

is, according to Andersson, widely dispersed over both Great Namaqua and Damara Lands and Anchieta met with it both in Benguela and Angola. To the north of the Congo it is replaced by a smaller and darker race that has been named by Fraser, *Anthus gouldi*; this extends as far north as Senegambia.

*Habits.*—This Pipit is found both on the open veldt, where it runs on the ground and perches on stones and ant-hills, and among bushes and trees, when it perches on the latter if disturbed, and flies from tree to tree if followed. Its flight is low and undulating. Its call-note is a weak "chirp." In summer the cock sings prettily from the top of a bush or ant-hill. These Pipits feed almost entirely on insects. They build about the end of September. The nest is cup-shaped, constructed of dry grass lined with finer grass and a few hairs, and is usually concealed in a slight hollow overhung by grass. The eggs, almost invariably three in number, are dull white or cream-coloured, thickly marked with spots and mottlings of grey, brown and reddish-purple. They measure about  $0.85 \times 0.60$ .

*raalteni* South African

145. **Anthus rufulus.** *Lesser Tawny Pipit.*

- Anthus rufulus*, Vieill. N. Dict. d'Hist. Nat. xxvi, p. 494 (1818); Gray, Gen. B. i, p. 206 (1847); Sharpe, Cat. B. M. x, p. 574 (1885); Shelley, B. Afr. i, p. 12 (1896); Oates, B. India, ii, p. 308 (1890).  
*Anthus caffer*, Sundev. Öfv. K. Vet.-Akad. Förh. Stockh. 1850 p. 100; Layard, B. S. Afr. p. 123 (1867); Gurney in Andersson's B. Damara Land, p. 113 (1872); Butler, Feilden and Reid, Zoologist, 1882, p. 335; Sharpe, ed. Layard's B. S. Afr. pp. 434, 852 (1884).  
*Anthus raalteni*, Bp. Consp. i, p. 248 (1850); Layard's B. S. Afr. p. 123 (1867); Gurney in Andersson's B. Damara Land, p. 113 (1872).

*Description.* *Adult male in summer.*—Above, clear brown, the feathers centred with blackish; the lower back and rump uniform grey-brown; least wing-coverts with black bases, broad rufous margins and white tips; rest of coverts blackish edged with rufous; quills blackish, their outer webs rufous, the primaries edged with white, the inner secondaries more broadly with buff; outer pair of tail-feathers white with a dusky streak on the inner web; other tail-feathers blackish edged with brown; crown and nape like the back; lores dusky; eyebrow and cheeks buff; ear-coverts brown; moustache line black; throat and centre of abdomen whitish; rest of under surface bright buff-brown, the upper chest streaked with black; axillaries and under wing-coverts dusky.

719 *Imetochylacus tenuellus*  
*Balden Pipit*

Iris brown ; bill brown ; legs and feet yellowish.

Length 6·50 ; wing 3·50 ; tail 2·50 ; tarsus 1·05 ; culmen 0·55.

*Adult female*.—Resembles the male in colour but is slightly smaller.

*Distribution*.—This Pipit has a very wide range both in Africa and Asia. In the former continent it is found over the greater part of the country to the south of the Cunéné and Zambesi Rivers, while to the eastward it extends from the latter river as far north as Egypt. In Asia it is a resident in every part of India and Ceylon, and extends into Burmah, Malayia, Java, Sumatra, Borneo and the Philippine Islands. In South Africa it is generally distributed over Cape Colony, being resident near Cape Town, Swellendam, Port Elizabeth, Grahamstown, Colesberg, Eland's Post and elsewhere. In Natal it is a common and permanent resident in the higher districts, and the same remark applies to the Orange Free State. It is widely distributed and fairly common in the Transvaal as well as in Matabili and Mashonaland as far north as the Zambesi. In Damara Land it appears to be rare, as Andersson only obtained a single example.

*Habits*.—This bird is usually found in pairs. Like *A. pyrrhontus*, it is fond of perching on trees, should there be any in the neighbourhood, but it is frequently met with on the open veldt, feeding, on the ground, on various insects and small seeds. It also frequents the cattle kraals for the sake of the small beetles and other insects it finds on the dung. It has a rough "chirping" call-note and a rather sweet and pleasant song, which is generally uttered from the branch of a tree or the top of an ant-hill or stone. The nest is cup-shaped, built of dry grass, lined with finer grass and hairs, by the side of a grass-tuft. The eggs, usually three in number, are pale stone-colour, thickly mottled with purplish-brown and red. They measure about 0·80 × 0·60.

#### 146. *Anthus bocagii*. *Bocage's Pipit*.

*Anthus pallescens*, *Bocage (nec Vigors)*, *Jorn. Lisb.* 1874, p. 52 ; *id.* *Orn. Angola*, p. 294, pl. 8, fig. 2 (1881).

*Anthus bocagii*, *Nicholson*, *Ibis*, 1884, p. 469 ; *Sharpe. Cat. B. M.* x, p. 579 (1885) ; *Shelley, B. Afr.* i, p. 12 (1896).

*Description*.—*Adult*.—Like *Anthus rufulus* but paler ; above, ash-brown mottled with darker brown ; the rump and upper tail-

713. *Anom alanthus leucocraspedus*  
*Damara Pipit*



coverts unmottled; wing-coverts and quills pale brown edged with white; outer pair of tail-feathers white with an oblique streak of brown on the inner web; other tail-feathers dark brown, the central pair edged and tipped with white; crown like the back; lores, eye-brow and cheeks white; ear-coverts pale brown; below, white tinged with buff-brown; the chest marked with triangular black spots; axillaries and under wing-coverts buffish.

Length 6·40; wing 3·30; tail 2·40; tarsus 1·00; culmen 0·55.

*Distribution*.—Northern Damara Land and Angola.

*Habits*.—This Pipit, which can only be looked upon as a pale race of *Anthus rufulus*, doubtless resembles the latter in habits.

### Genus III. MOTACILLA.

*Type*.

**Motacilla**, *Linnaeus Syst. Nat.* i, p. 328 (1766) ..... *M. alba*.

Bill and nostrils as in *Anthus*. Wing moderately long (rather pointed in migratory, rounded in resident species), with only nine clearly visible primaries, the first being nearly obsolete, the second, third and fourth nearly equal and longest, the fifth shorter; the inner secondaries very long, as long, or nearly as long as the primaries. Tail of twelve feathers, long and nearly even, about as long as the wing. Tarsus rather long and slender, about twice as long as the middle toe without its claw; toes moderate, the middle joined to the outer at its base; hind claw short and curved or long and nearly straight; front claws short and curved. Plumage of plain colours, destitute of spots and streaks; a distinct summer and winter dress; sexes nearly alike; the young closely resembling the adults or not very different. Two moults in the year, one complete, one partial.

The Wagtails, some twenty-seven species and subspecies, range over the greater part of Europe, Asia and Africa, one species occasionally reaching Alaska. Seven species occur in South Africa, three being resident, four annual migrants from Europe.

Wagtails spend much of their time on the ground searching for their food which consists almost entirely of insects. They run with rapidity, have an undulating flight, and have gained their trivial name from their habit of constantly vibrating their tails up and down. They fall naturally into two groups, the Pied Wagtails, with the wing longer than the tail and a hooked hind claw, of which three species are resident in South Africa, and the Yellow Wagtails,

*Motacilla flava.**Motacilla longicauda**Motacilla flava.**Motacilla longicauda*

with the tail longer than the wing and with a long and but slightly curved hind - claw. Four species and subspecies of the latter group are annual visitors to South Africa from Europe and Western Asia. It will be seen from the accompanying illustration that the wing of the migratory *M. flava* is longer and more pointed than that of the resident *M. longicauda*, and that the hind claw of the former, a bird that frequents from choice flat and marshy pasture lands, is long and but slightly curved, while that of the latter, a species that habitually runs on wet and slippery stones and rocks, is short and strongly hooked.

*Key to the Species.*

- a. Wing longer than the tail; plumage black, brown, or grey and white, without any yellow.
- a<sup>1</sup>. Entire upper surface black ..... *M. vidua*, in summer, p. 255.
- b<sup>1</sup>. Crown and back clear grey ..... *M. longicauda*, p. 257.
- c<sup>1</sup>. Crown black; back ash-brown..... *M. vidua*, in winter, p. 255.
- d<sup>1</sup>. Crown ash-brown; back brown ..... *M. capensis*, p. 259.
- b. Wing shorter than the tail; above, back olive-yellow; lower surface of body yellow.
- e<sup>1</sup>. Crown yellow or olive-yellow ..... *M. campestris*, p. 260.
- f<sup>1</sup>. Crown blue-grey or slate-grey.
- a<sup>2</sup>. With a white eyebrow; lower throat unmottled ..... *M. flava*, p. 261.
- b<sup>2</sup>. No eyebrow; lower throat mottled with greenish ..... *M. flava borealis*, p. 263.
- g<sup>1</sup>. Crown black.
- c<sup>2</sup>. No eyebrow, lower throat unmottled..... *M. melanocephala*, p. 263.

147. **Motacilla vidua.** *African Pied Wagtail.*

L'Aguimp ou La Lavandière Pie, *Levaill. Ois. d'Afr.* iv, p. 82, pl. 178 (1805).

*Motacilla vidua*, *Sundev. Æfvers*, Stockholm, 1850, p. 128; *Sharpe*, ed. *Layard's B. S. Afr.* pp. 545, 853 (1884); *id. Cat. B. M.* x, p. 488 (1885); *Shelley, B. Afr.* i, p. 11 (1896).

*Motacilla vaillantii*, *Bp. Conspect.* i, p. 13 (1850); *Gurney, in Andersson's B. Damara Land*, p. 112 (1872).

*Motacilla aguimp*, *Layard, B. S. Afr.* p. 119 (1867); *Sharpe, Cat. Afr. B.* p. 73 (1871); *id. in Oates's Matabili Land, App.* p. 317 (1881).

*Motacilla gariepina*, *Holub and Pelzeln, Orn. Südaf.* p. 85 (1882).



*Description. Adult male in summer.*—Head, upper surface of body, upper tail and lesser wing-coverts jet-black; middle and greater wing-coverts white with black bases; primary coverts and inner secondaries black; remaining quills black with white bases; two outer tail-feathers white, the penultimate edged with black on the inner web, other tail-feathers black; eyebrow, patch on sides of neck and throat white; ear-coverts black, joined to the nape and a black patch on the fore-neck; rest of under surface white, the sides and flanks grey; axillaries and under wing-coverts white; quills below dusky, the bases of inner webs white.

Iris hazel; bill and feet black.

Length 8·00; wing 3·60; tail 3·70; tarsus 1·00; culmen 0·70.

*Adult female.*—Like the male in colour, but with a shorter tail.

*Adult in winter.*—Upper surface of body ash-brown; remaining plumage as in summer.

*Young.*—Above, brown (becoming grey in a later stage), the rump and upper tail-coverts dusky, the outer feathers of the tail-coverts edged with white; tail-feathers dark brown, the two outer white. Wing: the portion that is black in the adults is brown in the young. Head: crown brown-black, some of the feathers with white edgings; eyebrow white; lores and ear-coverts black; cheeks and sides of neck white. Below white, crossed on the lower throat by a band of black, the sides and flanks tinged with brown.

*Distribution.*—The greater part of Africa south of the Sahara extending into Egypt and Southern Palestine. In South Africa it is somewhat local in its distribution. In the Colony it occurs near Beaufort West and in the neighbourhood of Colesberg and is abundant on the Orange River near Upington and elsewhere. It is common in many parts of Natal and occurs also in the Orange Free State, the Transvaal and in Bechuana and Mashonalands, ranging as far north as the Zambesi River where it is common nearly everywhere from the mouth to the Victoria Falls. Andersson did not meet with this Wagtail in Damara Land and in Namaqua Land only on the Orange River, but Anchieta collected a specimen at Humbe to the north of the Cunéné River and Sala met with it in Benguela and Angola. To the north of the Quanza it occurs on most of the rivers on the west coast. In Eastern and North-eastern Africa it is a somewhat common, but at the same time local species. In Egypt it ranges as far north as the first cataract.

*Habits.*—In summer this elegant Wagtail is easily recognised by

its strongly contrasted colours of jet-black and pure white. It is most frequently met with on the borders of large rivers and vleis, almost invariably in pairs. It is also partial to pasture land where it follows the cattle and horses for the sake of the flies and other insects which infest them. It feeds also on small beetles, the larvæ of various water insects and mosquitoes. The latter it catches on the wing whilst skimming over the surface of the water. The ordinary note of this Wagtail is a sharp "chirrup" resembling that of the other species; in spring and summer it has a low pitched but pleasant and melodious song. It runs with great celerity, and its long tail is incessantly in motion, vibrating up and down. Its nest, built in September in inland districts, but about the beginning of August on the coast of Natal, is placed in a hole, on a ledge of rock, or against the bank of a stream. It is rather large, with thick walls and is cup-shaped, constructed outwardly of dead leaves, tendrils and dry grass and lined with finer grass, rootlets and hair. The eggs, from three to five in number, are larger than those of the Cape Wagtail, of a pale brown ground-colour, thickly freckled and spotted all over with darker brown and grey. They measure  $0.90 \times 0.60$ .

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*Clara African long Tailed*

148. **Motacilla longicauda.** *Grey-backed Wagtail.*

*Motacilla longicauda*, Rüpp. N. Wirb. Vög. p. 84, pl. 29, fig. 2 (1835); Layard, B. S. Afr. p. 119 (1867); Sharpe, ed. Layard's B. S. Afr. p. 544 (1884); id. Cat. B. M. x, p. 495 (1885); Shelley, B. Afr. i, p. 11 (1896).

*Description.* *Adult male.*—Above, crown and upper surface of body delicate blue-grey; lesser wing-coverts blackish edged with grey; inner greater coverts white, the centre of the outer web black; remaining coverts black tipped with white; quills black, the outer primary with a patch of white towards the centre of the inner web, the amount of white increasing with each succeeding quill until the inner web at the base is entirely white, the outer webs of the inner secondaries also broadly margined with white toward the ends; four centre tail-feathers black edged with white; rest of tail-feathers pure white; eyebrow and eyelids white; forehead and lores dusky; ear-coverts grey and white; cheeks and under surface of body white interrupted by a black crescent across the lower throat, the sides and flanks tinged with blue-grey;

axillaries, under wing and tail-coverts white ; edge of wing mottled black and white.

Iris brown ; bill black ; legs and feet greyish-brown.

Length 7·50 ; wing 3·10 ; tail 3·85 ; tarsus 0·80 ; culmen 0·55.

*Adult female*.—Resembles the male in plumage.

*Young*.—Above, browner than the adults ; the crescent across the lower throat browner and narrower ; the white wing-markings less distinct ; the centre tail-feathers mottled at their bases with white.

*Distribution*.—Eastern Cape Colony : rather rare, but found near Grahamstown, Kingwilliamstown and East London, becoming more common, but still locally distributed, in Natal, Zululand, and the Eastern Transvaal. It is also found in Abyssinia.

*Habits*.—This peculiarly beautiful and graceful Wagtail is not uncommon on such of the rocky streams of Natal and Zululand as are broken by numerous rapids and waterfalls and I have myself never met with it elsewhere. Unless the young have lately left the nest, seldom more than a pair are seen together, and these monopolise a certain range of stream which they appear never to leave. In their habits they very closely resemble the Grey Wagtail of Europe. In all its movements the Grey-backed Wagtail is extremely active and graceful, whether tripping over the pebbles by the side of the stream, or flitting over its surface in pursuit of flies or mosquitoes. Its flight is low and undulating, but direct ; when resting its tail is constantly vibrating. It is fond of perching on certain favourite rocks or stones that show their tops above the stream, especially if they are surrounded by broken water. Both the male and female frequently utter a sharp “chirrup,” almost invariably so as they take flight ; in spring and summer the male has in addition a low but pleasant warbling song of a few notes. This Wagtail feeds entirely on insects, chiefly on the larvæ of dragon-flies and mosquitoes, but also on flies and other winged insects. A newly completed nest, found near Pinetown in Natal on August 5, was built on the ledge of a rock by the side of a waterfall ; it was rather bulky, constructed outwardly of dead leaves, moss and dry grass, the cup-shaped hollow lined with fine rootlets and hair. At this date the eggs had not been laid and they appear to be unknown to collectors.



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149. *Motacilla capensis*. Cape Wagtail.

*Motacilla capensis*, Linn. *Syst. Nat.* i, p. 333 (1766); *Layard, B. S. Afr.* p. 118 (1867); *Gurney in Andersson's B. Damara Land*, p. 111 (1872); *Holub and Pelzeln, Orn. Südaf.* p. 82 (1882); *Butler, Feilden and Reid, Zoologist*, 1882, p. 337; *Sharpe, ed. Layard's B. S. Afr.* pp. 547, 853 (1884); *id. Cat. B. M.* x, p. 493 (1885); *Shelley, B. Afr.* i, p. 11 (1896).

La Lavandière brune, *Levaill. Ois. d'Afr.* iv, p. 80, pl. 177 (1805).

"Quick Stertje" of the Dutch.

*Description. Adult male.* — Above, brown; wing-coverts like the back, edged with grey; quills darker brown, the first edged with white; tail-feathers dusky-brown, the outer pair white, crossed diagonally by a brown streak; crown and back of neck greyish-brown; narrow eyebrow white; lores, feathers below eye, and ear-coverts dusky; cheeks and throat white, the lower throat crossed by a broad crescent of black; rest of under surface white tinged with yellow, the sides browner; under tail-coverts white; thighs and axillaries brown; under wing-coverts white with dusky bases; under surface of quills dusky, the base of the inner webs white; edge of wing mottled brown and white.

Iris hazel; bill, legs and feet brownish.

Length 7·25; wing 3·25; tail 3·45; tarsus 0·90; culmen 0·60.

*Adult female.* — Duller than the male in colour, the black chest-band narrower, also rather smaller.

Length 6·85; wing 3·20; tail 3·35.

*Young.* — The head brown like the back; the white throat tinged with brown; the greater wing-coverts distinctly tipped with white.

*Distribution.* — South Africa: abundant throughout Cape Colony, and very common on the Orange River, but becomes rarer to the north of this; extends to the Guano Islands off the west coast. Local and not common in Great Namaqualand, Damara Land, and Benguela. Abundant in the higher districts in Natal but uncommon on the coast. Resident throughout the Orange Free State and the Transvaal, becoming rarer to the north of the Limpopo River, in Matabili and Mashonaland. Somewhat local in Griqualand West and Bechuanaland.

*Habits.* — This species, the commonest Wagtail, and one of the tamest and most familiar birds in South Africa, is nearly everywhere a resident or only subject to local migrations of no great extent. Although most abundant on the banks of rivers or vleis

and in moist and humid situations, it frequents also dry and arid localities at a distance from water, and is found equally in towns and villages and in uninhabited districts. It is even a resident on the barren and waterless guano islands off the west coast. Like its congeners it appreciates the society of horses and cattle, and follows these animals closely in order to catch the flies and other insects which they disturb. It runs on the ground with activity and frequently rises a few feet in the air in pursuit of a fly. When prolonged its flight is undulating, in a series of curves. It has a sharp call-note, "chis-sek," frequently uttered, almost invariably as it takes flight, and in spring a somewhat feeble song. It feeds almost entirely on insects, principally on flies and mosquitoes and their larvæ, occasionally on a few small seeds. The nest, usually commenced in September, is a somewhat bulky cup-shaped structure, built of dry grass and dead leaves and lined with short hairs and fur. It is often placed against the bank of a river or stream, under a stone, or among the exposed roots of a tree or bush, sometimes in the hole of a wall or rock, at others on a heap of driftwood. The eggs, three or four in number, are buff-coloured, thickly spotted and mottled all over with brown. They average about  $0.84 \times 0.56$ .

705 *Budytes flavifrons* Yellow Pipit  
150. *Motacilla campestris*. Ray's Yellow Wagtail.

*Motacilla campestris*, Pallas, *Reis. Russ. Reichs.* iii, *Anhang*, p. 697 (1776); Sharpe, *Cat. B. M.* x, p. 510, pl. 6, figs. 1 and 2 (1885); Shelley, *B. Afr.* i, p. 11 (1896).

*Motacilla rayi*, Dresser, *B. Europe*, iii, p. 277, pl. 131 (1875).

*Budytes campestris*, Sharpe, ed. Layard's *B. S. Afr.* p. 551 (1884).

*Description.* *Adult male in breeding plumage.*—Above, back olive-yellow merging into bright yellow on the rump, olive edged with yellow on the upper tail-coverts; lesser wing-coverts like the back; remaining coverts and quills dusky brown edged with yellowish and pale brown, two outer tail-feathers white, the inner webs with a brown streak, the next with the outer web and a patch on the inner white, the rest dusky brown; forehead bright yellow becoming duller on the crown; eyebrow, eyelids, lores, centre of ear-coverts and cheeks bright yellow; rest of ear-coverts olive; below, bright yellow, the sides tinged with greenish; axillaries bright yellow; under wing-coverts white tinged with yellow and mottled with dusky.

Iris brown ; bill, tarsi and feet black.

Length 6·35 ; wing 3·10 ; tail 2·75 ; tarsus 0·90 ; culmen 0·52.

*Adult female*.—Like the male but less bright, the forehead like the crown.

*Adult in winter*.—Crown olive-yellow uniform with the back ; ear-coverts entirely yellow.

*Distribution*.—Breeds in the British Isles and in South-eastern Russia and Turkestan. Migrates in winter to West and South Africa, ranging as far south on the west coast as Gaboon, on the east as Mozambique, the Transvaal and Natal.

*Habits*.—Ray's Wagtail is only found in South Africa during the season of the European winter and it can only be looked upon as a somewhat rare visitor at this period, as the majority of this species do not wander as far south. The individual birds that migrate to and from the Transvaal and Natal probably breed in South-eastern Russia or in Turkestan, as the more western birds that reach England are known to do so by migrating across the Straits of Gibraltar and so through Spain and France. This Wagtail haunts from choice flat or undulating pasture or corn-land, and is partial to swampy grass-lands near meres and rivers. It is fond of running after cattle for the sake of the flies and other insects which it finds infesting these animals. It flies in undulating curves. Its note is the usual "chirrup" of the Wagtails. In addition to various insects it feeds on small water-molluscs.

Towards the end of April or beginning of May, in England, it commences to build its nest in a depression of the ground in a cornfield or meadow. It is a cup-shaped structure, built of dry grass and moss, lined with fine rootlets, hair and down. From four to six greyish-white eggs, mottled with brown and often with a few black hair-streaks towards the large end, are laid about the first week in May. They measure  $0\cdot78 \times 0\cdot56$ .

*Budytes us Grell*  
151. **Motacilla flava.** *Blue-headed Wagtail.*

*Motacilla flava*, Linn. *Syst. Nat.* i, p. 331 (1760) ; Dresser, *B. Europe*, iii, p. 261, pl. 129, figs. 1 and 2 (1875) ; Sharpe, *Cat. B. M.* x, p. 516, pl. 6, figs. 3-5 (1885) ; Shelley, *B. Afr.* i, p. 11 (1896).

*Budytes flava*, Cuvier, *Règne Anim.* p. 371 (1817) ; Gurney in Andersson's *B. Damara Land*, p. 112 (1872) ; Sharpe, *ed. Layard's B. S. Afr.* pp. 550, 853 (1884).

*Description*. *Adult male in summer*. — Above, olive-yellow, brighter on the rump ; upper tail-coverts dusky edged with olive-



yellow; tail-feathers dusky brown, the two outer pairs white edged internally with dusky brown; least wing-coverts olive-brown; middle coverts dusky brown tipped with yellowish; greater coverts brownish-black edged with light brown and tipped with white; quills brown tinged with yellow and edged with grey; crown and nape blue-grey; eyebrow, cheeks and chin white; lores black; ear-coverts dark grey; under surface of body bright yellow; axillaries and under wing-coverts white tinged with yellow.

Iris hazel; bill, legs and feet black.

Length in flesh 6.75; wing 3.10; tail 2.90; tarsus 0.80; culmen 0.50.

*Adult female*.—Not as bright as the male; the back and wing-coverts shaded with brown; below much paler yellow.

*Young*.—Above, brownish, the head like the back; eyebrow pale buff; below, throat white; rest of under surface white tinged with brown on the chest and slightly mottled with dusky; axillaries olive-yellow; under wing-coverts yellowish-white.

*Distribution*.—Breeds throughout the greater part of Europe, Northern Asia and Alaska: migrates during the northern winter to Africa, where it ranges as far south as Damara Land, the Transvaal and Natal: it is also found in Southern Asia and the Moluccas.

*Habits*.—In all its habits this species closely resembles *M. campestris*. It feeds on various small insects and their larvæ, also upon minute water molluscs, hence it is fond of haunting marshy ground bordering on lakes and rivers. It is a frequent attendant on cattle, for the sake of the flies that hover round these animals. Its flight is in a series of undulating curves. It frequently utters a sharp "chirrup." The nest is built on the ground among grass, or under cover of a weed, and frequently in swampy localities. It is formed of rootlets, dry grass, and moss, lined with hairs. The eggs, four to six in number, resemble those of *M. rayi*.

In the Transvaal, Ayres writes, "This Wagtail appears in spring in considerable numbers, and leaves again about the latter end of April; they do not appear to rest here, neither are they in good plumage; the best plumaged birds are to be got just as they are leaving. During their stay here they are common on our market-square (at Potchefstroom) early every morning, where they find abundant food amongst the short grass and the cow-dung, which attracts many insects, on which they are often seen feeding in company with *Motacilla capensis*."

In Damara Land this species is said by Andersson to appear only in or about the rainy season.

152. **Motacilla flava borealis.** *Grey-headed Wagtail.*

*Motacilla flava borealis*, *Sundev. Öfv. K. Vet.-Akad. Förh. Stockh.* 1840, p. 53; *Finch and Hartl. Vog. Ostaf.* p. 272 (1870).

*Motacilla viridis*, *Gray, Gen. B.* i, p. 203 (1847); *Dresser, B. Europe*, iii, p. 181, pl. 129, fig. 3 (1875).

*Budytes viridis*, *Sharpe, ed. Layard's B. S. Afr.* p. 853 (1884).

*Motacilla borealis*, *Sharpe, Cat. B. M.* x, p. 522, pl. 7, fig. 2 (1885); *Shelley, B. Afr.* i, p. 12 (1896).

*Description.* *Adult male in summer.*—Differs from the male of *M. flava* in having no white eyebrow; the crown and nape dark slate-colour; the lores, feathers round the eye, and ear-coverts black; the lower throat mottled with greenish-black.

Iris hazel; bill, legs and feet black.

Length 6·85; wing 3·30; tail 3·00; tarsus 0·80; culmen 0·50.

*Adult female in summer.*—Duller in colour than the male; crown and nape olive-grey; a distinct eyebrow dull white; lores and ear-coverts grey-brown, with a whitish streak below; below, paler yellow than the male, the lower throat mottled with greenish-black.

Length 6·50; wing 3·00; tail 2·80.

*Young.*—Above, greyish-brown, the rump greyer; crown like the back; lores and eyebrow white; feathers before and under the eye, as well as the ear-coverts, slate-colour; cheeks and throat white, the lower throat mottled with greenish-black; rest of under surface buff-colour, the sides and flanks tinged with brown, the centre of breast with large black spots; axillaries and under wing-coverts white, their bases dusky.

*Distribution.*—Breeds in Northern Europe and Siberia and migrates in winter to Southern Asia and Africa. In South Africa it has occurred once or twice in the Transvaal.

*Habits.*—The Grey-headed Wagtail can hardly be looked upon as more than a geographical race of *M. flava*. Its habits are similar, and its eggs resemble those of the latter.

703 *Budytes feddesi*  
153. **Motacilla melanocephala.** *Black-headed Wagtail.*

*Motacilla melanocephala*, *Licht. Verz. Doubl.* p. 36 (1823); *Dresser, B. Europe*, iii, p. 273, pl. 160 (1875); *Shelley, B. Afr.* i, p. 12 (1896).

*Motacilla feddesi*, *Michah. Isis*, 1830, p. 814; *Sharpe, Cat. B. M.* x, p. 527 (1885).

*Budytes melanocephalus*, *Bp. Fauna Ital., Ucc.*, pl. 31, fig. 3 (1832); *Sharpe, ed. Layard's B. S. Afr.* p. 551 (1884).

*Budytes flava melanocephala*, *Schl. Rev. Crit.* p. 38 (1814); *Heugl. Orn. N. O.-Afr.* i, p. 321 (1869).

699 *Motacilla agrippa* *Grey Wagtail*

*Description. Adult male in summer.*—Above, olive-green, the rump olive-yellow; upper tail-coverts dusky, tinged with olive-yellow, externally white; lesser wing-coverts brown edged with olive; middle and greater coverts blackish edged and tipped with olive-yellow; quills brown edged with yellowish; tail-feathers brown edged with olive; the outer pair white with a brown streak on the inner web; crown, nape, lores, feathers below eyes and ear-coverts black; cheeks and under surface bright yellow; axillaries yellow; under wing-coverts white tinged with yellow and mottled with grey.

Iris brown; bill, legs and feet dusky-brown.

Length 6·75; wing 3·25; tail 3·00; tarsus 0·85; culmen 0·50.

*Adult female.*—Above, brownish-olive; below, very pale yellow.

*Young.*—Resemble those of *M. flava*.

*Distribution.*—Breeds in South-eastern Europe and Central Asia; winters in Africa and India. A single example is recorded as having been forwarded from the Transvaal by Mr. Ayres.

*Habits.*—The habits of this Wagtail, as well as its nest and eggs, resemble those of *Motacilla flava*.

## Family VIII. CERTHIIDÆ.

Bill sometimes nearly straight, but usually curved and more or less long and slender, the edges smooth. Nostrils basal, covered by a membranous scale, but not by bristles or plumes; rictal bristles absent. Wing with ten primaries of varying length. Tail with twelve rectrices, of varying shape and length. Tarsus rather short, scutellated anteriorly (except in *Tichodroma*). Feet strong; toes well developed; claws curved and sharp, especially the hind-claw. Tongue non-tubular. Plumage usually barred or spotted. Sexes alike or nearly so; the young paler in colour.

The family contains three genera (excluding *Climacteris*), and about ten species and subspecies, which range over Europe, Asia, Africa and North America.

### Genus I. SALPORNIS.

*Type.*

**Salpornis**, Gray, *Proc. Zool. Soc.*, 1847, p. 7 ..... *S. spilonotus*.

Bill longer than the head, slender, decurved, compressed laterally; the edges of the mandibles smooth and unnotched.



Nostrils longitudinal, exposed, in a groove, with a slight operculum; rictal and nasal bristles and plumes absent. Wings long and pointed, falling a little short of the tip of tail; the first primary short, about 0·75; the second very long and nearly equal to the third, fourth and fifth, which are equal and longest; the secondaries extremely short. Tail of twelve soft feathers, short and nearly square. Tarsus short, strong and scutellated anteriorly;



*Salpornis spilonotus salvadorii*

toes long and strong, especially the hinder, which is, without its claw, nearly as long as the tarsus; the middle toe about equal in length to the hind toe, the outer and inner equal and shorter. Claws sharp and curved, the hind claw especially so. Plumage brown much barred and spotted with white. Sexes alike. An autumn moult only.

The genus includes a single species which is distributed over the plains of India and tropical Africa, ranging as far south as Mashonaland. The Indian *Salpornis spilonotus* (Franklin) only differs from the African *Salpornis salvadorii* (Bocage) in having the face and central tail-feathers of a slightly lighter shade.

691 154. **Salpornis spilonotus salvadorii.** *African Spotted Creeper.*

*Halypsornis salvadorii*, Bocage, *Jornal. Acad. Lisboa*, 1878, pp. 198, 211; *id. Orn. d'Angola*, p. 289, pl. x (1881).

*Salpornis salvadorii*, Gadow, *Cat. B. M.* viii, p. 330 (1883); Shelley, *Ibis*, 1882, p. 255; 1899, p. 366, *id. P. Z. S.* 1888, p. 37; *id. B. Afr.* i, p. 11 (1896); Sharpe, ed. *Layard's B. S. Afr.* p. 835 (1884); *id. Ibis*, 1891, p. 590.

*Salpornis emini*, Hartlaub, *P. Z. S.* 1884, p. 415, pl. 37.

"Mangwidso" of the Mashonas (Marshall).

*Description.* *Adult male.*—Above, mantle and back black, each feather tipped with whitish; rump and upper tail-coverts deeper black tipped with roundish spots of white; wing-coverts and quills black tipped and barred with reddish-white, the three outer primaries edged externally with whitish; tail-feathers black crossed by three interrupted bands of white and tipped with white, the two centre feathers shaded with rufous-brown; forehead rufous; crown blackish spotted with white; eyebrow white; streak through eye black; ear-coverts and sides of face variegated black and white; throat dull white with a few black spots; rest of under surface reddish-white, with subterminal spots of black to most of the feathers; under tail-coverts whitish (Bocage).

Iris brown; bill dusky-brown; tarsi and feet ash-brown.

Length in flesh 5·75, of skin 5·00; wing 3·30; tail 2·15; tarsus 0·65; culmen 0·65.

*Adult female.*—Resembles the male in plumage.

*Distribution.*—Discovered by Anchieta at Caconda in Benguela, where it is not uncommon, and where it has since been obtained by Mr. Van der Kellen on the Kasinga river. Messrs. Jameson and Ayres met with a pair on the Ganyani river in Mashonaland in September, and Mr. Guy A. K. Marshall obtained an example near Salisbury in October. It appears to be not uncommon in Nyasaland, having been collected at Zomba in August, and also at Fort Hill and Ikawa. Mr. F. J. Jackson met with this Creeper at Savé on Mount Elgon, at a height of 6,000 feet, in February, and Emin

Pasha procured examples at Tobbo, Langomori, and Wadelai on the Upper White Nile. The Indian *S. spilonotus typicus* appears to be confined to the plains of India to the South of the Himalayas.

*Habits.*—But little has been recorded regarding the habits of the African race of this interesting species. The following remarks from the "Ibis" for 1882, p. 255, refer to a female shot by Mr. Ayres on the Ganyani river in Mashonaland on September 17, 1881, "A pair were seen creeping about the trunks and branches of the large trees. From the state of the ovaries the hen was evidently about to lay. The crop contained caterpillars."

Dr. Emin Bey, in a letter to Dr. Hartlaub ("P. Z. S.," 1884, p. 416), remarks, "During a walk through the ripe Eleusine-fields, a small bird met my attention climbing up and down the haulms and flying in short whips from one haulm to another. What could it be? Not a *Nectarinia* to be sure. The little unknown was very silent. But how great was my pleasure and surprise as my shot brought down a *Certhia*, certainly the first bird of this group met with in Central Africa. All my efforts to procure more specimens were fruitless."

This specimen was described and figured by Dr. Hartlaub in the Zoological Society's "Proceedings" for 1884, p. 415, pl. 37, under the name of *Salpornis emini*; but Capt. Shelley remarks regarding a specimen subsequently collected by Emin Pasha at Tobbo ("P. Z. S.," 1888, p. 37):—"This is, no doubt, *S. emini*, Hartl., but I can detect no character by which it can be separated from *S. salvadorii* after comparing it with three specimens of the latter, two from Benguela and one from Mashonaland."

Mr. F. J. Jackson shot a male and female of this Creeper on February 11, on Mount Elgon in Central Africa, amongst acacia trees.—("Ibis," 1891, p. 590).

The following account of the Indian *S. spilonotus* is from the "Fauna of British India" (Birds, vol. i, p. 333) Blanford writes:—"These birds keep to the largest trees, running round the stems in all directions and flying with a steady flight, not unlike that of a Woodpecker, but swifter and more elegant. They have a whistling note." "Mr. Cleveland found the nest in Gurgaon on April 16. It was placed on a horizontal bough of a tree and attached to a vertical shoot. It was cup-shaped, and composed of bits of leaf-stalk and leaves, chips of bark, and the dung of caterpillars, bound together by cobwebs; it was very firm and elastic. The nest contained two young birds and one egg. The



latter was greenish-white, with a ring of blackish-brown specks round the large end, and a few specks over the remainder of the shell. It measured  $0.68 \times 0.53$ ."

## Family IX. PROMEROPIDÆ.

The family *Promeropidæ* contains two species only of peculiar Long-tailed Sugar-birds or Honey-suckers, whose range is confined to South Africa. They were formerly placed among the *Nectariniidæ* or Sunbirds, or with the *Meliphagidæ* or Australian Honey-eaters; but they differ from both these groups in several important points of structure. The family contains a single genus.

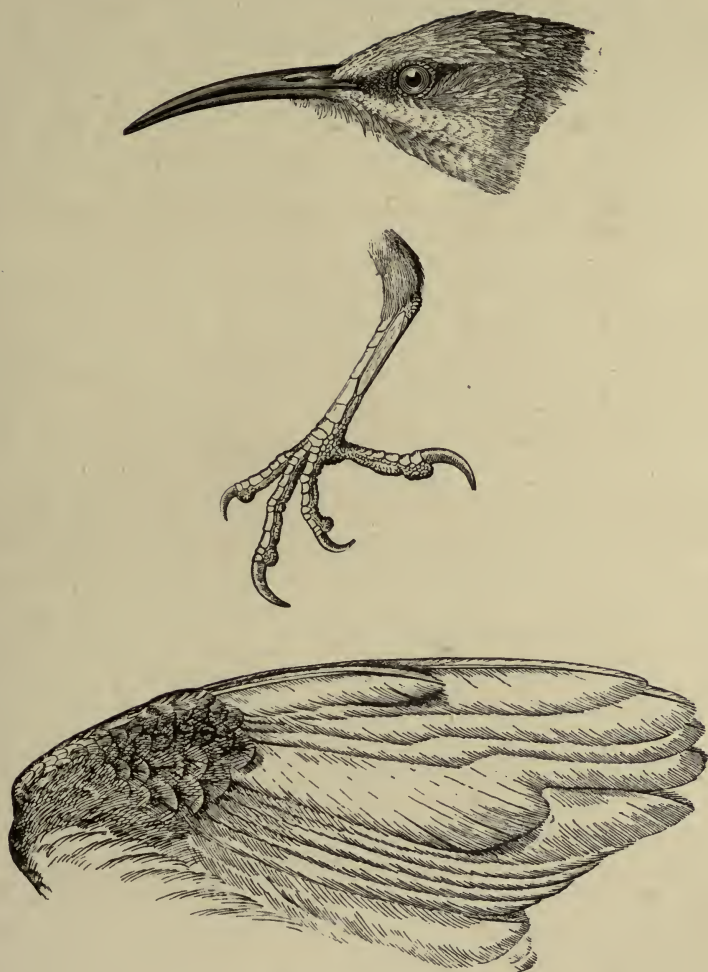
### Genus I. PROMEROPS.

*Type.*  
**Promerops**, *Brisson, Ornith.* ii, pl. 34 (1760).....*P. cafer*.

Bill slender, slightly curved, about twice as long as the head, the culmen ridged, the edges of the mandibles smooth, not serrated as in the *Nectariniidæ*; nostrils in a groove, longitudinal, operculated, uncovered by bristles or plumes. No rictal bristles. Tongue extensile, semi-tubular, the dorso-lateral edges frayed out. Wing short and rounded, with ten primaries; the first about half as long as the second, which is considerably shorter than the third; the third, fourth, fifth and sixth about equal and longest; the inner webs of the second to the fifth broad and emarginate, especially that of the fifth. Tail of twelve narrow feathers, very long and much graduated. Tarsus moderately long, strong, scutellated anteriorly, the sides covered by two plates; toes long and strong, especially the hinder; claws sharp and curved. Plumage non-metallic; the feathers of the forehead narrow and shaft-like with decomposed webs. Sexes alike, or nearly so, in colour, but the six central tail-feathers of the male are longer during the breeding season. Range confined to South Africa.

#### *Key to the Species.*

- a.* Forehead and crown buff-brown; lower throat, upper breast and sides of neck rufous-brown ..... *P. cafer*, p. 269
- b.* Forehead and crown deep chestnut-red; lower throat, upper breast and sides of neck paler chestnut-red *P. gurneyi*,  
p. 273

*Promerops cafer.*

155. **Promerops cafer.** *Cape Long-tailed Sugar-bird.*

Merops cafer, *Linn. Syst. Nat.* i, p. 183 (1766).

Upupa promerops, *Linn. Syst. Nat.* i, p. 184 (1766).

Le Grand Sucrier ou Sucrier du Protea, *Levaill. Ois. d'Afr.* vi, p. 139, pls. 287, 288 (1808).

Promerops cafer, *Shaw, Gen. Zool.* viii, p. 143 (1811); *Gray, Gen. B.* i, p. 97 (1847); *Shelley, Monogr. Cinnyridæ*, p. 377, pl. 121 (1877);

*Holub & Pelzeln, Ornith. Südafr.* p. 74 (1882); *Sharpe, ed. Layard's B. S. Afr.* p. 305 (1884); *Gadow, Cat. B. M.* ix, p. 283 (1884); *Shelley, B. Afr.* i, p. 6 (1896).

*Promerops caffer, Layard, B. S. Afr.* p. 74 (1867).

"Zuiker-vogel" of the Dutch, in common with the Sunbirds.

*Description. Adult male in breeding plumage.*—Above pale brown, the feathers with dark brown centres: wings dark brown, the shafts of the primaries white; rump and upper tail-coverts olive-yellow; tail feathers greyish-brown, their shafts dark brown; the stiff shaft-like feathers of forehead and crown buff-brown merging into brown on the occiput; lores black, prolonged down the sides of the throat; sides of head and neck rufous-brown; ear-coverts brown; cheeks and upper throat white, separated by a black streak, the shafts of many of the feathers prolonged into bristles; lower throat and upper breast rufous-brown, many of the feathers with white shafts and tips; vent and under tail-coverts bright yellow; rest of under surface white, broadly streaked with brown on the sides and flanks; under wing-coverts brown; under surface of quills dusky.

Iris dark brown; bill, legs and feet black.

Length 17·00 to 19·50; wing 3·80; tail 11·5 to 14·00 (the six centre feathers prolonged from 6·25 to 8·75 beyond the next longest); the three outer feathers on each side much graduated; tarsus 0·90; culmen 1·30.

*Adult female.*—In colour like the male but paler; the tail much shorter.

Length 9·50; wing 3·30; tail 5·10; tarsus 0·85; culmen 1·20.

*Young.*—Hatched naked, but soon becoming covered with black down. On first leaving the nest the upper surface is brown, the feathers with rufous margins and tips; cheeks, throat, edge of wing and centre of abdomen white; malar streak black; remaining under surface of body a lighter brown than the back; under tail-coverts brownish.

*Distribution.*—Confined to Cape Colony, and most abundant towards its south-western extremity, becoming rare to the east of Grahamstown. Its range appears to coincide with that of certain sugar-bushes (proteas).

*Habits.*—The Cape Long-tailed Sugar-bird is rarely found at any great distance from its favourite protea-bushes but in districts where these shrubs grow luxuriantly these birds are frequently very numerous and generally resident. When not nesting they are usually met with in flocks of a dozen or more, busily engaged in



hunting through a thicket of proteas in search of nectar and various small insects.

When sucking up the nectar of one of the larger protea-blossoms, the bird perches on the edge of the flower, plunges its long bill and the greater part of its head downwards among the petals, and retains it in this position until satisfied. As a result the narrow, shaft-like feathers of the forehead frequently become saturated and stained with juice and dusted over with pollen and it is probable that this bird plays an important part in the cross-fertilisation of several species of protea. At times these Sugar-birds feed on the saccharine juices of the aloe, the Cape honeysuckle, and several of the larger heaths, as well as on spiders, small beetles and a variety of smaller insects. They are expert fly-catchers, darting upon passing insects from their perch and rarely missing their mark.

Towards the end of April or beginning of May, the males, when not feeding, fighting, or chasing one another with shrill cries, may be usually seen perched on the summit of some prominent bush or young pine-tree, their long, flexible and curved central tail-feathers blowing about in the wind, often in a reversed curve over the bird's head. At intervals one of them will mount twenty or thirty feet in the air, incline his body backwards, violently jerk his tail up and down, and at the same time rustle the feathers together, and bring his wings with sharp, resounding "claps" against his sides, before returning to his perch to indulge in an outburst of song. Occasionally a male may be seen to throw the longer tail-feathers into a double curve.

At the same season the hens amuse themselves by flying round and round in a small circle.

This Sugar-bird breeds in winter, in May, June and July, the flowering season of one of the larger white proteas. The nest, usually completed towards the end of May, is somewhat large, deeply cup-shaped, and strongly built of small sticks and twigs of heath, fibrous rootlets, dry grass, and the spines of pine trees, lined with pine leaves and the red downy seeds of a protea. It is carefully concealed, sometimes in a tuft of heath near the ground, at others in the crotch of a protea-bush four or five feet above it, but more generally in the neighbourhood of Cape Town, in a thick young pine tree from four to ten feet above the ground. On one occasion I found a nest built on some broken-down sedge in a swampy hollow. Two eggs are laid, and these are incubated, as far as I have observed, by the female only. She sits very closely,



*Promerops capensis*, male "showing off."

with her long tail projecting at an angle over the edge of the nest. The eggs are hatched at the end of fifteen or sixteen days and the young remain in the nest for about five weeks. The eggs, usually laid about the end of May or early in June, vary considerably in size, shape and colour; some are much elongated, others rounded ovates. As a rule the ground colour varies from light buff to reddish-brown; this may be more or less covered with blotches, scrawls, and zig-zag markings of deep purplish black, or with finer spots and lines of brown. Many eggs resemble those of the European Bunting (*Emberiza miliaria*); others, as far as colour goes, those of many of the Sunbirds (*Nectariniidæ*). They average  $1.00 \times 0.72$ .

156. **Promerops gurneyi.** *Natal Long-tailed Sugar-bird.*

*Promerops cafer* (nec Linn), *Gurney, Ibis*, 1862, p. 27.

*Promerops gurneyi*, *J. Verreaux, P. Z. S.* 1871, p. 135, pl. viii; *Shelley, Monogr. Cinyridæ*, p. 381 (1877); *id. B. Afr.* i, p. 7 (1896); *Barratt, Ibis*, 1876, p. 202; *Sharpe, ed. Layard's B. S. Afr.* p. 306 (1884); *Gadow, Cat. B. M.* ix, p. 284 (1884).

*Description. Adult male.*—(N. W. Transvaal, Jan. 16, 1889). Like the male of *P. cafer*, but with the tail much shorter; the lanceolate feathers of the forehead and crown deep chestnut-red with pale shaft markings, forming a distinct cap; the sides of neck, lower throat, and upper chest paler chestnut-red, many of the chest-feathers with whitish tips; the upper surface of body tinged with olive; cheeks and throat whitish separated by a row of dusky spots.

Iris dark brown; bill, legs and feet black.

Length 11.00; wing 3.90; tail 6.50; tarsus 0.85; culmen 1.25.

*Adult female.*—Resembles the male, but is paler and duller in tint, with a shorter tail.

Length 9.50; wing 3.30; tail 5.00; tarsus 0.85; culmen 1.20.

*Distribution.*—Locally distributed over Natal, Zululand, Gazaland, Swaziland, the Transvaal and the north-eastern districts of the Orange Free State.

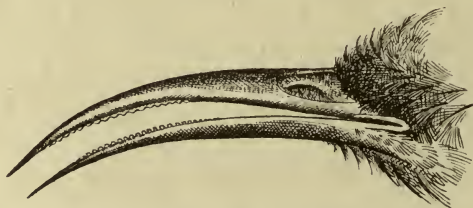
*Habits.*—This species is apparently only a winter visitor to Natal. Near Pinetown it is not very common, but a certain number appear annually and may be generally found feeding with Sunbirds on the nectar of the Australian "Bottle-brush." They are very tame and unsuspicious as a rule. Mr. Ayres remarks in "The



Ibis," "In habits this bird much resembles *Nectarinia natalensis*, its food also being the same, viz., nectar and small insects especially spiders. I believe it is only to be found during the winter months in Natal." Mr. Barratt met with this Sugar-bird in the Transvaal, between Pretoria and Lydenburg, in the "zuikerbosch," or sugar-bush.

### Family X. NECTARINIIDÆ.

Bill cylindrical, pointed, elongated and curved, or moderately short and nearly straight, the edges of both mandibles finely serrated for the terminal half or third (serrations not always visible to the naked eye); tongue cylindrical, tubular, bifid, each half frayed out ventrally, and protractile; nostrils basal and protected by membrane. Wing rounded, of ten primaries, the first short. Tail-feathers twelve. Tarsus moderate, scutellated anteriorly. Plumage: males, as a rule, with some part of their plumage with metallic colouring, and often with bright pectoral tufts during the breeding season; in winter they resemble the females, who are of plain colours (with some exceptions) during the entire year; the young resemble the female; a single moult in the year.



Bill of *Anthothreptes collaris* (magnified) to show the serrations.

The Sunbirds are distributed over the greater portion of the Ethiopian, Oriental and Australasian Regions. About one hundred and twenty species have been described, including eighty that inhabit Africa. Of these, sixteen species and subspecies occur to the south of the Zambesi and Cunéné Rivers. Sunbirds feed largely on the nectar of various flowers but also on small insects. They all build domed nests, frequently with a projecting portico over the side entrance, and usually suspend them from the outer twigs or leaves of bushes and trees.

The eggs of the South African species are invariably two in number and are usually much mottled and spotted with dark colours.

*Key to the Genera.*

- a.* Bill longer than the head and curved.
  - a*<sup>1</sup>. Male only with metallic plumage in the breeding season.
  - a*<sup>2</sup>. Tail square, but the two centre feathers prolonged in the male during the breeding season..... *Nectarinia*, p. 275.
  - b*<sup>1</sup>. Male only with metallic plumage in the breeding season (except in *C. verreauxi*, where both sexes are alike partly metallic; and in *C. olivaceus*, where both male and female are without metallic plumes).
  - b*<sup>2</sup>. Tail square, or nearly square, the two centre feathers not prolonged in the breeding male, or only slightly so, in *C. mariquensis* ..... *Cinnyris*, p. 278.
  - c*<sup>1</sup>. Male only with metallic plumage.
    - c*<sup>2</sup>. Tail much graduated, wedge-shaped, less so in the female..... *Anthobaphes*, p. 293.
- b.* Bill shorter than the head and nearly straight.
  - d*<sup>1</sup>. Both sexes with metallic plumage at all seasons.
  - d*<sup>2</sup>. Tail square, the centre feathers never prolonged..... *Anthothreptes*, p. 296.

Genus I. **NECTARINIA.**

*Nectarinia*, *Illiger, Prodr.* p. 210 (1811) ..... *Type.* *N. famosa.*

Bill longer than the head and much curved. Nostrils with an operculum but without bristles; tongue bifid and frayed out medio-ventrally; wing: first primary very small, the second long, the wing-tip formed by the third, fourth and fifth; tail square, but in summer the two central feathers are considerably prolonged in the male. Tarsus scutellated anteriorly; hind toe short; claws short, curved and sharp. Plumage: the males in the breeding season with very rich metallic plumage and with yellow pectoral tufts, at other seasons like the females, which are dressed in very plain colours at all seasons.

This genus is confined to Africa, one species only, out of the nine described, being found to the south of the Zambesi.

These Sunbirds frequent rather open localities where flowering bushes, especially proteas, grow. They feed on saccharine juices and insects, and build domed nests, with overhanging porticoes, suspended from the twigs or leaves of bushes. Two elongated eggs, much streaked and mottled with dark colours, are laid.



*Nectarinia famosa.*

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157. ***Nectarinia famosa.*** *Malachite Sunbird.*

*Certhia famosa*, Linn. *Syst. Nat.* i, p. 187 (1766).

Le sucrier malachite, *Levaill. Ois. d'Afr.* vi, p. 143, pls. 289, 290 (1808).

*Nectarinia famosa*, *Burchell, Trav. S. Afr.* i, p. 245 (1822); *Layard, B. S. Afr.* p. 77 (1867); *Andersson's B. Damara Land*, p. 68 (1872); *Shelley, Monogr. Cinnnyridæ*, p. 13, pl. v. (1877); *id. B. Afr.* i, p. 2 (1896); *Gadow, Cat. B. M.* ix, p. 5 (1884); *Holub and Pelzeln, Orn. Südafri.* p. 74 (1882); *Sharpe, ed. Layard's B. S. Afr.* pp. 306, 330 (1884).

*Description. Adult male in summer.*—Entire head, body, and lesser and middle wing-coverts brilliant metallic malachite-green, shot with gold on the head, neck, back and breast; spot before eye, greater wing-coverts and quills, under surface of wing, thighs, vent and tail black; the greater coverts, inner secondaries and tail-feathers edged with metallic green.

Iris dark brown; bill, legs and feet black.

Length 9·50; wing 3·00; tail (to end of two central feathers which project 2·80 beyond the rest of tail) 5·00; tarsus 0·65; culmen 1·25.

*Adult female.*—Above, pale earth-brown; wing-quills darker brown, the secondaries edged with whitish; tail-feathers dark brown, the outer web of outermost white; cheeks yellow; below pale brown, darker on the chest, sides and flanks, tinged throughout with yellow; vent and under tail-coverts whitish.



Iris dark brown; bill, legs and feet black.

Length 6·00; wing 2·65; tail 2·20; tarsus 0·65; culmen 1·10.

*Young*.—Resemble the female, but the males are yellower on the under surface

*Note*.—Towards the end of the breeding season the males begin to gradually lose their metallic plumage, as well as their long central tail-feathers and end by assuming a dull garb like that of the females. Young males after their first moult resemble adult males in their winter dress; they gain the metallic plumage and long central tail-feathers at their second spring moult.

*Distribution*.—A common species over the greater portion of Cape Colony, Southern Great Namaqua Land, the Orange Free State, the higher districts of Natal and Zululand, extending over the greater part of the Transvaal, but becoming rarer towards the Limpopo River. It is local and somewhat scarce in Matabili and Mashonaland, but ranges as far north as the Zambesi and Shiré River valleys.

*Habits*.—This large and beautiful Sunbird is a common resident in nearly every district in which sugar-bushes (proteas) flourish, being equally abundant on low ground but a few feet above the sea level and on mountain slopes to a height of between six and seven thousand feet. Among the higher foot-hills of the Drakensberg Range in Natal it is especially numerous during the flowering of the proteas in October and November. The Malachite Sunbird feeds not only on the saccharine juices of various flowering shrubs but also on insects which it finds among the petals, and especially upon small beetles and spiders. Occasionally it catches flies on the wing, and on one occasion I noticed a male catch and swallow two small lizards, but I imagine that such "big game" is not often indulged in. During the pairing season the brilliantly coloured cocks are constantly fighting or chasing one another with rapid flight and shrill cries through the bushes; at this time too, the males frequently indulge in a short, but melodious and somewhat loud song, usually uttered from the summit of a bush. The ordinary call-note of both sexes is a sharp single or double chirp. Unless they have been previously molested these are among the tamest of birds and show great indifference to the presence of man. On the Cape Flats this Sunbird begins to build in August, among the Drakensberg Mountains of Natal towards the end of October or beginning of November. The nest is rather large and bulky, pear-shaped, with a projecting portico over the side entrance. It is nearly

*In January  
took two  
with fresh  
in, at Van  
in the Drakensberg*

always suspended from the outside twigs of a bush or tall weed, and is constructed of dry grass, the fibres of leaves and the smaller stems of plants, bound together with cobwebs and frequently decorated on the outside with bits of lichen. The interior is lined with fine dry grass, hair, and occasionally feathers. The eggs, invariably two in number, are elongated, of a pale brown ground-colour, closely dotted and mottled all over with dark brown and slate-grey. They average  $0.84 \times 0.52$ .

## Genus II. CINNYRIS.

*Type.*

**Cinnyris.** *Cuvier, Règn. Anim. i, p. 412 (1817) .....C. splendidus.*

Bill much curved and pointed, longer than the head, the culmen ridged; nostrils basal, with an operculum but without bristles. Wing with the first primary very short, the third, fourth and fifth longest. Tail square or slightly rounded or graduated, shorter than the wing. Tarsus scutellated anteriorly. Plumage: some portion of the plumage of the males with metallic colouring during the breeding season (except in *C. olivaceus*), and many of them with



*Cinnyris gutturalis.*

yellow, orange or scarlet ornamental pectoral tufts; in winter the males resemble the females in having very plain colours, with the exception of *C. verreauxi*, in which species both sexes alike have submetallic colours and scarlet pectoral tufts.

About seventy species belonging to this genus are known. They are distributed over the Ethiopian and Indo-Malayan Regions, one species having a very limited range in Palestine. From fifty to sixty species and subspecies are found in the Ethiopian Region, twelve occurring within our limits.

All the *Cinnyrides* feed on the saccharine juices of flowers and on insects. The males of all the South African species sing more or less melodiously during the breeding season. They build domed

nests suspended from the outer twigs of bushes and trees, and rear one or two broods in a season. The eggs are very dark in colour, and invariably two in number in the South African species.

*Key to the Species (adult males).*

- a. Entire head, neck and upper surface of body metallic-green or blue-green.
  - a<sup>1</sup>. Without pectoral tufts ..... *C. mariquensis*, p. 279.
  - b<sup>1</sup>. With yellow pectoral tufts.
    - a<sup>2</sup>. Breast and abdomen white, a narrow black pectoral band..... *C. leucogaster*, p. 281.
    - b<sup>2</sup>. Abdomen ash-brown, a narrow collar of steel-blue followed by a scarlet chest-band.
      - a<sup>3</sup>. Chest-band scarlet, 0·75 wide ..... *C. afer*, p. 282.
      - b<sup>3</sup>. Chest-band lighter scarlet; 1·00 wide..... *C. ludovicensis*, p. 284.
      - c<sup>3</sup>. Chest-band darker scarlet; 0·50 wide ... *C. chalybeus*, p. 284.
- b. General plumage, above and below, soft velvety black or brown; without pectoral tufts; forehead and throat metallic.
  - c<sup>1</sup>. Lower throat and chest bright scarlet, the feathers with subterminal bars of blue..... *C. gutturalis*, p. 286.
  - d<sup>1</sup>. Chest velvety black or brown like the abdomen.
    - e<sup>2</sup>. Upper tail-coverts metallic.
      - d<sup>3</sup>. General plumage velvety black ..... *C. amethystinus*, p. 287.
      - e<sup>3</sup>. General plumage velvety brown ..... *C. bradshawi*, p. 289.
    - d<sup>2</sup>. Upper tail-coverts like the back and non-metallic ..... *C. kirki*, p. 289.
- c. Plumage above with a submetallic gloss.
  - e<sup>1</sup>. Sexes dissimilar: male with orange-red pectoral tufts; throat and breast black; centre of abdomen and under tail-coverts white..... *C. fuscus*, p. 290.
  - f<sup>1</sup>. Sexes similar. Entire under surface pale ash-brown; pectoral tufts scarlet ..... *C. verreauxi*, p. 291.
- d. Sexes alike; both without any trace of metallic plumage; above olive, below olive-yellow; pectoral tufts yellow ..... *C. olivaceus*, p. 292.

158. *Cinnyris mariquensis*. *Southern Bifasciated Sunbird.*

*Cinnyris mariquensis*, *Smith, App. Rep. Exp. S. Afr.* p. 53 (1836) *Shelley, Monogr. Cinnyridæ*, p. 211, pl. 65 (1877); *id. B. Afr.* i, p. 3 (1896); *Gadow, Cat. B. M.* ix, p. 44 (1884); *Sharpe, ed. Layard's B. S. Afr.* pp. 319, 832 (1884).



*Nectarinia bifasciata*, *Jardine, Monogr. Sunbirds*, pp. 174, 250, pl. iv (1843); *Layard, B. S. Afr.* p. 77 (1867); *Chapman, Trav. S. Afr. App.* p. 407 (1868); *Holub and Pelzeln, Orn. Südaf.* p. 73 (1882).

*Cinnyris bifasciata*, *Gurney in Andersson's B. Damara Land*, p. 70 (1872).

*Description. Adult male.*—Entire head, throat, neck, back, upper tail and lesser and middle wing-coverts metallic golden-green, shot with copper-colour on the head, neck, scapulars and lesser wing-coverts; greater wing-coverts and quills brown-black; tail black glossed with brown; in front of eye a patch of velvety black; below the green throat a narrow band of steel-blue followed by a broad belt of dark scarlet, many of the feathers edged with steel-blue; rest of under surface of body and wing black, some of the outer under wing-coverts edged with steel-green.

Irides dark brown; bill, legs and feet black.

Length 5.20; wing 2.75; tail 2.10; tarsus 0.70; culmen 0.85.

*Adult female.*—Above, ash-brown, the upper tail-coverts black broadly tipped with pale brown; wings dark brown, the feathers edged with paler brown; tail greenish-black, the two outer feathers edged externally and tipped with white; crown and sides of face ash brown; eyebrow and cheeks white; a black streak between eye and bill; below dull white, shaded with brown on the sides, with yellow on the centre of breast and abdomen, the feathers of the lower throat, upper breast and under tail-coverts mottled with large brown centres; under wing-coverts mottled brown and white.

Iris dark brown; bill, legs and feet black.

Length 4.75; wing 2.45; tail 1.95; tarsus 0.70; culmen 0.80.

*Young.*—Resembles the female in plumage.

*Distribution.*—Confined to South Africa. It has not been recorded from Cape Colony or Natal, but has been obtained at Ulundi and Eschowe in Zululand, by Messrs. Woodward. In the Transvaal it is a common species, the commonest Sunbird, according to Mr. Buckley, from Pretoria to Matabililand. Sir A. Smith collected specimens at Kurrichain and it occurs throughout Matabili and Mashonaland, ranging as far north as the Zambesi. It is found near Lake Ngami and is very common in Ondongo and not uncommon in Damara Land, according to Andersson.

*Habits.*—Mr. Ayres writes in "The Ibis" for 1871, p. 150: "This lovely little bird I first shot at some distance from the river Limpopo, during the month of July. I found several feeding amongst some aloes, but they were shy and difficult to obtain.

Flowers being at this season exceedingly scarce, they frequently hunted for small insects amongst the dry seed-tops of the high grass, hovering round the stem as a Humming-bird would do, and thus remaining stationary, but darting away immediately on my approach, so that I found it difficult to get within forty or fifty yards of them."

Andersson writes: "It is usually seen in pairs, and frequents the banks of periodic streams; I never saw it far away from such localities."

*Cinnyris talatala*

159. **Cinnyris leucogaster.** *South-African White-breasted Sunbird.*

*Cinnyris leucogaster*, *Vicill. Nouv. Dict. d'Hist. Nat.* xxxi, p. 515 (1819); *Gadow, Cat. B. M.* ix, p. 40 (1884); *Sharpe, ed. Layard's B. S. Afr. Index* (1884); *Shelley, B. Afr.* i, p. 3 (1896).

*Nectarinia talatala*, *Smith, App. Rep. Exp. S. Afr.* p. 58 (1836); *Sharpe, ed. Layard's B. S. Afr.* pl. vii (1884); *Holub and Pelzeln, Orn. Südaf.* p. 72 (1882).

*Cinnyris talatala*, *Gurney in Andersson's B. Damara Land*, p. 72 (1872); *Shelley, Monogr. Cinnyridæ*, p. 229, pl. 71 (1877); *Sharpe, ed. Layard's B. S. Afr.* pp. 318, 313 (1884).

*Description. Adult male.*—Entire head, neck and upper surface of body, also the lesser and middle wing-coverts, metallic-green, shot with steel-blue on the forehead, lesser wing and upper tail-coverts; greater wing-coverts and quills dark brown with paler edges; tail-feathers blue-black edged with metallic-green and violet; chin steel-blue, merging into metallic-green on the throat and this into metallic-violet on the upper chest, bordered below by a band of black; pectoral tufts pale yellow; rest of under surface white; under wing-coverts and inner margins of quills pale ash-brown.

Iris dark brown; bill, legs and feet black.

Length 4.45; wing 2.30; tail 1.75; tarsus 0.65; culmen 0.80.

*Adult female.*—Above, crown, sides of head and back pale earth-brown; eyebrow paler brown; wing-coverts and quills dark brown with paler edges; tail-feathers brown-black tipped with whitish and edged with pale brown; below, white tinged with brown on the throat.

Iris dark brown; bill, legs and feet black.

Length 4.15; wing 2.05; tail 1.50; tarsus 0.65; culmen 0.75.

*Distribution.*—Not rare in Natal and Zululand, more common in Swaziland, Portuguese East Africa and the Transvaal, ranging

through Matabililand, Mashonaland and Bechuanaland into Ondongo, the Okavango River district and Benguela, and extending westward into Damara and Great Namaqua Lands.

*Habits*.—Andersson remarks, in the "Birds of Damara Land," p. 72: "I only met with this exquisite little species in my journeyings to the Okavango, in the neighbourhood of which river it was very abundant during the rainy season, being migratory, and arriving a little before the commencement of the rains.

"I also found it very common, though exceedingly shy, on the edge of the bush in Ondongo, where I obtained its nest on February 19; it was very large and strongly built, and resembled in form and material that of *C. fusca*; it contained five small, oblong, and pure white eggs. Another nest, taken on March 27, also contained five eggs.

"This Sunbird is exceedingly lively in its habits, and at the approach of the pairing-season it becomes inspired with the most lovely and exquisite melodies; in fact its voice is then enchanting beyond description, being a concentration of the softest trilling and melodious notes. I always found it either singly or in pairs."

In stating that this species lays five white eggs, Mr. Andersson was almost undoubtedly mistaken. All the nests of this Sunbird that I have seen, both in Natal and the Transvaal, have contained two eggs only, greyish in ground colour, spotted and dotted all over with slate colour and brown and averaging  $0.72 \times 0.50$ . The nest resembles that of other Sunbirds in being domed and pendent.

*Cinnyris*

160. **Cinnyris afer.** *Greater Double-collared Sunbird.*

*Certhia afra*, Linn. *Syst. Nat.* i, p. 186 (1766).

Le sucrier à plastron rouge, *Levaill. Ois. d'Afr.* vi, p. 176, pl. 300 (1808).

*Cinnyris afra*, *Cuvier, Règn. Anim.* i, p. 412 (1817); *Gurney in Andersson's B. Damara Land*, p. 70 (1872); *Gadow Cat. B. M.* ix, p. 35 (1884).

*Cinnyris afer*, *Shelley, Monogr. Cinnyridæ*, p. 249, pl. 77 (1877); *id. B. Afr.* i, p. 4 (1896); *Sharpe, ed. Layard's B. S. Afr.* pp. 313, 830 (1884).

*Nectarinia afra*, *Jardine, Sunbirds*, pp. 169, 247, pl. 2 (1843); *Layard, B. S. Afr.* p. 76 (1867); *Holub and Pelzeln, Orn. Südafr.* p. 72 (1882).

*Description. Adult male*.—Entire head, neck, throat, back and lesser and middle wing-coverts metallic-green; upper tail-coverts



steel-blue; greater wing-coverts and quills dark brown; tail-feathers brown-black, the outer edged with whitish; almost the entire breast bright scarlet, forming a broad belt, separated from the green throat by a narrow line of metallic-steel-blue; pectoral tufts pale yellow; abdomen, thighs and under tail and wing-coverts ash-brown.

Iris dark brown; bill, legs and feet black.

Length 5.50; wing 2.60; tail 2.25; tarsus 0.75; culmen 1.10.

*Adult female*.—Above, ash-brown; wings darker brown; tail-feathers brown-black, the outer edged with whitish; a slight eyebrow whitish; below much paler brown, the centre of body yellowish; edge of wing and under wing-coverts whitish.

Iris dark brown; bill, legs and feet black.

Length 5.00; wing 2.50; tail 2.25; tarsus 0.75; culmen 1.10.

*Young male*.—Resembles the female. Metallic feathers first appear on the head and throat.

*Distribution*.—Somewhat locally distributed over Cape Colony. It is not found near Cape Town, but is a common species in the neighbourhood of Swellendam, George, Knysna, Port Elizabeth, Grahamstown and East London. In Natal and the Orange Free State it is also abundant in certain districts though entirely absent from others. It is found in Zululand and is common near Lydenburg and Rustenburg in the Transvaal, according to Mr. Ayres. Mr. Buckley met with it in Swaziland. This species has been recorded also from the Lake Ngami country by Chapman, but probably in error, as this district is within the range of the more northern *C. ludovicensis*, and Andersson did not find *C. afer* in either Great Namaqua or Damara Land.

*Habits*.—This very beautiful Sunbird inhabits both the forest districts on the south coast and the more open grassy hillsides, but unlike the Lesser Double-collared Sunbird, rarely frequents flower gardens or the neighbourhood of houses. It visits a variety of flowers, including many of the proteas and heaths, but is especially fond of the flowering aloes, sucking nectar from their blossoms with avidity, and also catching the numerous insects that frequent these flowers for a similar purpose. The call-note of *C. afer* is a rather shrill chirp, the spring-song of the male a somewhat loud, cheerful and sustained melody, very pleasant to the ear.

The nest, the usual domed and pendent structure of the African Sunbirds, is built of dry grass, fibres of bark, cobwebs, and occasionally pieces of cast snake-skin, with a lining of hairs and feathers.

The two eggs are elongated in shape, the ground colour greyish, but so thickly covered with mottlings and spots of brown and slate-grey as to be almost invisible. They measure  $0.72 \times 0.52$ .

684 *Trochocerythra* *Greater*  
161. **Cinnyris ludovicensis.** *Northern Double-collared Sunbird.*

*Cinnyris ludovicensis*, *Bocage, Journ. Lisb.* 1868, p. 41; *Sharpe, ed.*

*Layard's B. S. Afr.* p. 830 (1884); *Shelley, B. Afr.* i, p. 4 (1896).

*Cinnyris erikssoni*, *Trimen, P. Z. S.* 1882, p. 451, pl. xxxii.

*Cinnyris afra erikssoni*, *Gadow, Cat. B. M.* ix, p. 38 (1884).

*Description. Adult male.*—Similar to the male of *C. afer* in colour, but with the scarlet breast-band lighter in shade and considerably wider, measuring an inch in width in adults. It is also smaller in size, with a shorter bill.

Iris dark brown; bill, legs and feet black.

Length 4.65; wing 2.50; tail 2.00; tarsus 0.62; culmen 0.66.

*Adult female.*—Similar to the female of *C. afer* in plumage, but smaller.

Length 4.50; wing 2.30; tail 1.65; tarsus 0.58; culmen 0.63.

*Distribution.*—North Damara Land and Mossamedes, ranging eastward to North Nyasaland.

*Habits.*—Mr. Eriksson met with this Sunbird not uncommonly "in the wooded ravines of the mountain range called Shella, rather over a hundred miles inland from the port of Mossamedes, at Little Fish Bay. He describes its habits to be precisely those of *C. chalybeus* and *C. afer*, both of which he had observed some years before at Knysna in the Cape Colony, but which neither he nor the late Mr. Andersson ever met with to the north of the Orange River" (*Trimen in "P. Z. S."* 1882, p. 452).

687 *Trochocerythra* *Cape*  
162. **Cinnyris chalybeus.** *Lesser Double-collared Sunbird.*

*Certhia chalybea*, *Linn. Syst. Nat.* i, p. 186 (1766).

Le sucrier à double collier, *Levaill. Ois. d'Afr.* vi, p. 178 (1808).

*Cinnyris chalybeus*, *Cuvier, Règn. Anim.* i, p. 412 (1817); *Gurney in Andersson's B. Damara Land*, p. 69 (1872); *Shelley, Monogr.*

*Cinnyridæ*, p. 253, pl. 78 (1877); *id. B. Afr.* i, p. 4 (1896); *Sharpe, ed. Layard's B. S. Afr.* pp. 314, 331 (1884).

*Cinnyris afra chalybea*, *Gadow, Cat. B. M.* ix, p. 37 (1884).

*Nectarinia chalybea*, *Burchell, Trav. S. Afr.* i, p. 221 (1822); *Jardine, Monogr. Sunbirds*, pp. 166, 248, pl. i (1843); *Layard. B. S. Afr.* p. 75 (1867).

682 M - *Rehderia* *Pondo Lesser Blue Col Sun*

*Description. Adult males.*—Similar to *C. afer* in plumage, but with the scarlet breast-band darker and narrower. Considerably smaller than *C. afer*.

Iris dark brown; bill, legs and feet black.

Length 5·00; wing 2·25; tail 1·90; tarsus 0·65; culmen 0·80.

*Adult female.*—Similar in colour to the female of *C. afer*, but much smaller.

Length 4·10; wing 2·10; tail 1·80; tarsus 0·65; culmen 0·72.

*Distribution.*—A common species over the greater part of Cape Colony; abundant in Little Namaqua Land, but does not appear to range to the north of the Orange River on the west coast. It extends throughout the Eastern Colony and Kaffraria, and thence through Natal, Zululand, and the Orange Free State into the Transvaal and Matabililand.

*Habits.*—Owing to its habit of frequenting flower gardens, its tameness, and the brilliant and showy plumage of the male, the present is probably the most generally recognised and best known of the South African Sunbirds. Like all its congeners it feeds both on small insects and the nectar of flowers. When extracting the latter it frequently hovers, Humming-bird like, with quivering wings, in front of the flower, then suddenly darts away to another to go through the same performance. Other Sunbirds occasionally poise themselves on their wings in front of flowers, but none so frequently as this species. Both male and female are extremely quick and agile on the wing, frequently darting to and fro with such rapidity that the eye can scarcely follow their movements. In spring the males are pugnaciously inclined, and spend a large portion of their time in chasing and being chased by rival males. At the same season the cock, whose ordinary note is a low chirp, becomes endowed with a soft warbling song, which he frequently utters from the spray of some bush not far from the haunts of the female.

The nest, built in August or September in Cape Colony, is a small, domed, pear-shaped structure, with a projecting porch over the side entrance, and is usually suspended from the outer twigs or leaves of a low bush. It is rather loosely constructed of fine dry grass, various fibres, and cobwebs, and is lined with feathers and hair. Sometimes this Sunbird takes possession of a caterpillar's nest, re-lines it, and lays its eggs in the interior. The two eggs resemble those of *C. afer* in being grey, thickly spotted and mottled with brown and slate colour, but they are smaller, averaging  $0\cdot66 \times 0\cdot45$ .



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*Chalcomitra*163. **Cinnyris gutturalis.** *Scarlet-chested Sunbird.**Certhia gutturalis*, *Linnaeus, Syst. Nat.* i, p. 186 (1766).Le sucrier protégé, *Levaillant, Ois. d'Afr.* vi, p. 165 (1808), part.*Nectarinia natalensis*, *Jardine, Monogr. Sunbirds*, pp. 193, 256, pl. 12 (1843); *Layard, B. S. Afr.* p. 80 (1867).*Nectarinia senegalensis*, *Strickland and Selater, Contr. Orn.*, 1852, p. 153; *Layard, B. S. Afr.* p. 80 (1867).*Chalcomitra gutturalis*, *Gurney in Andersson's B. Damara Land*, p. 73 (1872); *Shelley, B. Afr.* i, p. 4 (1896).*Cinnyris gutturalis*, *Shelley, Monogr. Cinnyridæ*, p. 261, pl. 81 (1877); *Sharpe, ed. Layard's B. S. Afr.* pp. 311, 830 (1884); *Gadow, Cat. B. M.* ix, p. 91 (1884).*Nectarinia gutturalis*, *Sharpe, Cat. Afr. Birds*, No. 364 (1871); *Holub and Pelzeln, Orn. Südaf.* p. 73 (1882).

*Description.* *Adult male.*—Entire head and body soft velvety black shaded with brown on the back; the forehead, centre of crown and cheeks glossed with metallic dark green, the upper throat with golden-green; centre of lower throat and chest bright scarlet, each feather with a subterminal bar of metallic blue; wing and tail golden-brown, a patch at the bend of wing metallic-black changing to violet and purple in certain lights; under wing-coverts black; quills below dark golden-brown.

Iris dark brown; bill, legs and feet black.

Length in flesh 6·00, of skin 5·75; wing 3·00; tail 2·25; tarsus 0·70; culmen 1·10.

*Adult female.*—Above, earth-brown; eyebrow and cheek dull white; wing and tail-quills brown slightly tipped with whitish; below buff-white, the throat, sides and flanks tinged with brown, the throat and chest mottled with dark brown; edge of wing and outer edge of primary coverts white; under wing-coverts mottled brown and white; bill, legs and feet black.

Length 5·25; wing 2·60; tail 2·00; tarsus 0·60; culmen 1·00.

*Young male.*—At first resembles the female; the change to the adult male plumage is first seen on the throat.

*Obs.*—The adult female of this species closely resembles the female of *C. amethystinus*; the chin and throat are, however, paler and more distinctly mottled with dark brown in the former, and, in addition, the primary coverts are edged with white.

*Distribution.*—East, South-east, and South-west Africa: ranging on the east coast from Mombasa to the Great Fish River in Eastern Cape Colony; on the west from the Congo River to Damara Land.

This species is found rather commonly in Pondoland, Natal and Zululand, and extends through the greater portion of Swaziland, the Transvaal, Matabili and Mashonaland as well as Portuguese East Africa. It is very abundant in the Zambesi valley, and was obtained by Dr. Holub at Pandamatenka.

*Habits.*—This large and brilliantly coloured Sunbird, although not so abundant as *C. amethystinus*, is common in Natal and Zululand during the entire year, but, during the hot season, it leaves the coast for the cooler highlands. It feeds largely upon the nectar of flowers, and, like some of the other Sunbirds, is particularly attracted by the scarlet blossoms of the "Kaffir Boom." I have also noticed this species return, day after day, together with Black Sunbirds, Gurney's Sugar-birds, and Cape Weaver-birds, to an Australian "Bottle-brush," and feed with avidity on the sweet juice of the flowers, as well as on the various insects that frequented them. It feeds also on spiders, small grubs, caterpillars, and termites. During the breeding season the male has a very sweet song of several clear "warbling" notes. The call-note of both sexes is a loud and shrill "chirp." The nest, completed about the end of December in Natal, is suspended from the extremity of the branch of a fruit tree, the outer twig of a bush, or the drooping leaves of a "Gum-tree" or "Black Wattle." It is pear-shaped, built of dry grass, wool, fibres of bark or the stems of plants, matted together with cobwebs, and ornamented with bits of bark and lichen. The lining is usually of hair or feathers. The side-entrance is always sheltered by an overhanging porch. The two eggs are greyish, thickly mottled and streaked with brown and purplish-brown. They measure 0.75 × 0.52.

*Chalcornis a. amethystinus*  
 164. **Cinnyris amethystinus.** *Black Sunbird.*

Le sucrier velours, *Levaill. Ois. d'Afr.* vi, p. 160, pl. 294 (1808).

*Certhia amethystinus*, *Shaw, Gen. Zool.* vii, p. 195 (1811).

*Nectarinia amethystina*, *Layard, B. S. Afr.* p. 79 (1867).

*Cinnyris amethystinus*, *Shelley, Monogr. Cinnyr.* p. 269, pl. 84 (1877);

*Sharpe, ed. Layard's B. S. Afr.* pp. 315, 331 (1884); *Gadow, Cat.*

*B. M.* ix, p. 97 (1844).

*Chalcornis amethystina*, *Shelley, B. Afr.* i, p. 4 (1896).

*Description.* *Adult male.*—All over a soft velvety black with a purplish shade; centre of crown brilliant metallic-green; cheeks, throat, least wing and upper tail-coverts rich metallic violet-purple, changing to coppery-red in some lights.

685 *Chamaea amethystina* *varius* *massae*  
*Nyassa yellow breasted Sunbird*

Iris dark brown ; bill, legs and feet black.

Length 5·60 ; wing 2·90 ; tail 2·10 ; culmen 1·15 ; tarsus 0·65.

*Young male*.—At first resembles the female ; at a later stage the front of crown and throat are as in the adult ; the lower throat sooty black ; remaining plumage as in the female.

*Adult female*.—Above, earth-brown tinged with olive ; wings and tail dark brown, the wing-coverts and secondaries with pale edges ; below, mottled with dark brown and yellowish, the throat browner, the abdomen and under tail-coverts yellower ; edge of wing whitish.

Wing 2·50 ; tail 1·80.

*Distribution*.—Cape Colony to the east of Swellendam, ranging throughout Natal, Zululand, Swaziland, and the Transvaal, and extending as far north as the Limpopo River. Not found on the west coast.

*Habits*.—In its habits the present species closely resembles the Scarlet-chested Sunbird, both frequenting much the same localities and visiting the same flowers in search of nectar and insects. In Natal the “Kaffir Boom,” a tree that bears bright scarlet blossoms in winter when otherwise destitute of foliage, is a favourite hunting ground with both species, and so closely does the nearly black plumage of *C. amethystinus* assimilate in colour with the dark naked branches of the tree, that as long as the bird is still, it is not easily distinguished on its perch. At other times this Sunbird visits the flowers of the Cape honeysuckle, the aloe, mimosa, and many other shrubs. Occasionally it feeds on insects, but not, I imagine, to any great extent. It is found most numerous on the outskirts of the forest or bush, in gardens, fruit-orchards or among the trees and bushes that fringe rivers and streams. The male has a clear and pleasant song, and a somewhat loud and shrill call-note.

The domed pear-shaped nest is suspended from the twig of a bush, the extremity of one of the boughs of a fruit-tree, or sometimes, at a considerable height, from the long pendent leaves of a blue gum-tree. It is rather roughly built of dry grass, small twigs, bits of bark, and cobwebs, and is lined with feathers and hair ; usually an overhanging portico shelters the small side entrance. The eggs, always two in number, are cream-coloured, thickly spotted, mottled and streaked with purplish-brown and dark grey ; they measure 0·72 × 0·50.



165. **Cinnyris amethystinus bradshawi.** *Bradshaw's Sunbird.*

*Cinnyris bradshawi*, *Sharpe*, *Ibis*, 1898, p. 137.

*Description*.—"This seems to be a small form of *C. amethystinus* and has metallic purplish upper tail-coverts. It is closely allied to *C. deminutus* of Angola, and has even a smaller bill than that race. The general colour of the plumage is velvety-brown and not black, as in *C. amethystinus*." (*Sharpe*.)

*Distribution*.—From the Zambesi (*Bradshaw*), to Witu, on the coast of British East Africa.

697 *Chalcomitra amethystina*  
166. **Cinnyris kirki.** *Kirk's Sunbird.*

*Nectarinia amethystina*, *Kirk*, *Ibis*, 1864, p. 320.

*Cinnyris kirkii*, *Shelley*, *Monogr. Cinnyridæ*, p. 273, pl. 85 (1877);

*Sharpe*, ed. *Layard's B. S. Afr.* p. 317 (1884).

*Cinnyris amethystina kirki*, *Gadow*, *Cat. B. M.* ix, p. 97 (1884).

*Chalcomitra kirki*, *Shelley*, *B. Afr.* i, p. 4 (1896).

*Description*. *Adult male*. "Differs from the male of *C. amethystinus* in being rather smaller and in having the upper tail-coverts blackish-brown like the back, with no portion of them metallic" (*Shelley*).

Iris dusky; bill, legs and feet black (*Ayres*).

Length 4.80; wing 2.55; tail 1.85; tarsus 0.65; culmen 0.95.

*Adult female*.—Similar in plumage to the female of *C. amethystinus*.

Wing 2.45; tail 1.65; tarsus 0.60; culmen 0.95 (*Shelley*).

*Distribution*.—From Salisbury, Hartley and the Umvuli River, in Mashonaland, to the Zambesi, and thence northward to Lamu on the east coast.

*Habits*.—Sir J. Kirk found this species on the Zambesi, feeding with other Sunbirds on low flower-bearing bushes, "searching the corallas for insects, and probably sucking the saccharine juices." The Rev. F. A. Buxton writes in the "*Ibis*" for 1881, p. 125; that at Mombasa, on the east coast, "This and all the preceding species of this genus are very fond of sucking the sap which flows from the young shoots of the cocoa-nut tree, when cut, as it oozes into the calabashes put for its reception."

On the Umvuli River, in Mashonaland, Messrs. Jameson and Ayres met with this Sunbird towards the end of August and beginning of September, feeding, along with *C. gutturalis*, on the flowers of the "German-sausage tree."

698 *Scladiorornis asturi* Melsetter Sunbird  
696 *Audemonia cuprea* Copper-cold-a

Mr. F. J. Jackson found its nest at Merereni, on the east coast, "suspended from the end of the branch of a mangrove, at the edge of a creek, in July."

687

*Hemicinnyris namaqua*167. **Cinnyris fuscus.** *White-vented Sunbird.*

Le sucrier namaquois ou à caleçon blanc, *Levaill. Ois. d'Afr.* vi, p. 168, pl. 296 (1808).

*Cinnyris fuscus*, *Vieill. Nouv. Dict. d'Hist. Nat.* xxxi, p. 506 (1819); *Gurney in Andersson's B. Damara Land*, p. 71 (1872); *Shelley, Monogr. Cinnyridæ*, p. 285, pl. 89 (1877); *Gadow, Cat. B. M.* ix, p. 75 (1884); *Sharpe, ed. Layard's B. S. Afr.* pp. 317, 832 (1884).

*Nectarinia fusca*, *Jardine, Monogr. Sunbirds*, pp. 183, 252, pl. 8 (1843); *Layard, B. S. Afr.* p. 79 (1867); *id. Ibis*, 1868, p. 244; *Chapman, Trav. S. Afr. ii, App.* p. 407 (1868).

*Elæocerthia fusca*, *Shelley, B. Afr. i*, p. 5 (1896).

*Description.* *Adult male.*—Head, neck, back, lesser wing-coverts, throat and upper breast blackish-brown, glossed with metallic-violet or coppery-bronze; rump brown, unglossed, or only slightly so; upper tail-coverts blackish-brown glossed with metallic-violet and purple; tail-feathers black edged with violet; greater wing-coverts and quills brown; lower breast, abdomen and thighs unglossed black; pectoral tufts orange-red; vent greyish; under tail-coverts white; axillaries and under wing-coverts black.

Iris dark brown; bill, legs and feet black.

Length 4.80; wing 2.30; tail 1.65; tarsus 0.65; culmen 0.85.

*Adult female.*—Sides of head and neck and entire upper surface light brown; eyebrow whitish; ear-coverts brown; wing-quills brown with paler edges; upper tail-coverts and tail black, the coverts slightly glossed with blue; below dull white; under tail-coverts pure white; thighs mottled brown and buff; edge of wing black and white; under wing-coverts brown.

Iris brown; bill, legs and feet black.

Length 4.40; wing 2.10; tail 1.60; tarsus 0.65; culmen 0.70.

*Young.*—Resemble the female, the young male being distinguished by a blackish band on the lower throat.

*Distribution.*—South-west Africa, ranging as far south as the Olifant River in Cape Colony. Very abundant in summer in Northern Cape Colony bordering on the Orange River, as at Upington (Bradshaw), Hopetown (T. Atmore), and Colesberg (Ortlepp). Equally common in Griqualand West and in South Bechuanaland, as well as in Great Namaqua and Damara Lands,

678 *Hemicinnyris microthorax*  
Zambesi Sunbird

where, according to Andersson, it is especially numerous near the coast.

*Habits*.—This sombrely coloured and unobtrusive Sunbird often frequents very desolate localities, such as sand-dunes on the coast, on which a scanty growth of scrubby bushes contrives to exist, or the scarcely more attractive desert karoos further inland.

In summer the bright orange breast-tufts of the male frequently attract attention, or, sometimes his subdued but pleasant song, while the very plainly dressed female generally escapes notice altogether. This species appears to be more insectivorous in its diet than are the majority of Sunbirds, but it feeds at times on the saccharine juices of flowers. The rather small nest is hung from the outer twigs of a bush; it is oval and domed, constructed of fine dry grass, soft fibres of bark, wool and cobwebs, lined with feathers and hair.

The eggs, two, and, according to Ortlepp, sometimes three in number, are white, spotted and mottled with dark and light purplish-brown.

They measure  $0.65 \times 0.42$ .

*Elæocerthia verreauxi*

688. 168. **Cinnyris verreauxi.** *Mouse-coloured Sunbird.*

*Cinnyris verroxii*, Smith, *S. Afr. Quart. Journ.* 1831, p. 13; *id.* *Ill. Zool. S. Afr. Birds*, pl. 57 (1839).

*Nectarinia verroxii*, Jardine, *Monogr. Sunbirds*, pp. 185, 253, pl. 9 (1843); *Layard*, *B. S. Afr.* p. 76 (1867).

*Cinnyris verreauxi*, *Bp. Consp. Av.* i, p. 407 (1850); *Shelley, Monogr. Cinnyridæ*, p. 287, pl. 30 (1877); *Gadow, Cat. B. M.* ix, p. 74 (1884); *Sharpe, ed. Layard's B. S. Afr.* p. 309 (1884).

*Elæocerthia verreauxi*, *Shelley, B. Afr.* i, p. 5 (1886).

*Description.* *Adult male*.—Above, upper surface of body as well as the middle wing-coverts, metallic-green, the bases of the feathers olive-brown; greater wing-coverts and quills dark brown with paler edges; tail-feathers black edged with brown; crown like the back; a black spot before the eye; ear-coverts dusky; below, pale ash-brown; pectoral tufts bright scarlet; under wing-coverts white tinged with olive.

Iris dark brown; bill, legs and feet black.

Length 5.25; wing 2.45; tail 2.00; tarsus 0.70; culmen 0.90.

*Adult female*.—Similar to the male in plumage.

*Distribution*.—South-eastern Cape Colony, Natal and Zululand.

*Habits*.—This Sunbird is found most abundantly in the thick

688 B. ? - v. *focheri* Northern Prov. Sunbirds

679 *Shelleya shelleyi*

*Shelley Sunbird*

680 *Microcorypha neergardi* Neergard Sunbird



belt of bush that fringes the coast of South-east Africa and is rarely met with inland much beyond its limits. It is seldom seen on the higher trees, but hunts assiduously through the lower growth of bushes in search of small insects and the saccharine juices of various flowering shrubs. Its call-note is a moderately loud single or double "chirp." During the breeding-season the male frequently sings from the top of a bush, in a low and soft warbling strain. The nest, domed like that of all African Sunbirds, is suspended from the outer twigs or drooping leaves of a bush. It is built of fine dry grass, bark fibres, and sometimes cobwebs; the interior is lined with hair and feathers. The two eggs are whitish, thickly mottled and spotted with markings of light and dark purplish-brown. They measure  $0.70 \times 0.52$ .

690 *Idagueria* *Greater*  
169. **Cinnyris olivacea.** *Olive-coloured Sunbird.*

*Cinnyris olivacea*, *Smith, Ill. Zool. S. Afr. Birds*, pl. 57 (1839); *Shelley, Monogr. Cinnyridæ*, p. 289, pl. 91 (1877); *Sharpe, ed. Layard's B. S. Afr.* p. 310 (1884); *Gadow, Cat. B. M.* ix, p. 78 (1884).

*Nectarinia olivacea*, *Jardine, Sunbirds*, pp. 186, 253 (1843); *Layard, B. S. Afr.* p. 78 (1869).

*Cyanomitra olivacea*, *Shelley, B. Afr.* i, p. 5 (1896).

*Inconspicuous*

*Description.* *Adult male.*—Above, olive-green, darker on the crown, yellower on the upper tail-coverts; wings and tail dark brown, the feathers edged with olive-yellow; below, pale olive-yellow; pectoral tufts bright yellow.

Iris dark brown; bill, legs and feet black.

Length 5.50; wing 2.70; tail 2.50; tarsus 0.65; culmen 1.10.

*Adult female.*—Similar to the male in plumage, but slightly smaller.

Length 5.00; wing 2.40; tail 2.00; tarsus 0.65; culmen 1.00.

*Distribution.*—From Eastern Cape Colony through Natal and Zululand to Portuguese East Africa.

*Habits.*—This inconspicuous Sunbird, entirely without metallic plumage, is chiefly confined to the coast bush on the east coast, but ranges for some distance inland. It frequents both the higher trees and bushes, and, according to Ayres, "is particularly fond of shady banana groves, taking the nectar from the long drooping flowers of the plant, and chasing one another about with great pertinacity."

691 *Id. olivacea olivacea* *Lesser Olive Sunbird*

At Pinetown, in Natal, it breeds in November. The domed and pear-shaped nest is constructed of fine fibres, dry grass, and cobwebs, lined with feathers, and is hung from one of the outer twigs of a bush or low tree. The eggs, two in number, are light brown mottled with dark brown and purple. They measure 0.70 × 0.50.

### Genus III. ANTHOBAPHES.

*Type.*

**Anthobaphes**, *Cabanis, Mus. Hein. i, p. 103 (1850) .....A. violacea.*

Bill longer than the head, the culmen rounded and curved downward; nostrils with an operculum, basal, exposed, without nasal bristles. Wing: the first primary short, the wing-tip formed by the third, fourth and fifth. Tail graduated or wedge shaped, the two centre feathers prolonged beyond the others; the tail in the female shorter and less graduated. Tarsus scutellated anteriorly. Plumage: the adult male with the head and fore part of the body richly metallic, and with yellow pectoral tufts; the female of very plain colours. One species only of this genus is known whose range is confined to Cape Colony.

#### 170. **Anthobaphes violacea.** *Orange-breasted Sunbird.*

*Certhia violacea, Linnaeus, Syst. Nat. i, p. 188 (1766).*

*Le sucrier orangé, Levaillant, Ois. d'Afr. vi, p. 152, pl. 292, figs. 1 and 2 (1808).*

*Nectarinia violacea, Layard, B. S. Afr. p. 78 (1867); Holub and Pelzeln, Orn. Südaf. p. 73 (1882).*

*Anthobaphes violacea, Gurney in Andersson's B. Damara Land, p. 74 (1872); Shelley, Monogr. Cinnnyridæ, p. 23, pl. 8 (1877); id. B. Afr. i, p. 6 (1896); Gadow, Cat. B. M. ix, p. 11 (1884); Sharpe, ed. Layard's B. S. Afr. p. 308 (1884).*

*Description. Adult male.*—Head, neck, upper back, least wing-coverts, and throat brilliant metallic-green with violet reflections, merging into metallic violet-purple on the chest; the bases of the feathers unglossed dark slate-colour; spot before eye and chin black; lower back and upper tail-coverts olive-yellow; wing and tail-feathers brown edged externally with olive-yellow; lower breast, abdomen and under tail-coverts orange-yellow, the breast tinged with red, the flanks with olive; thighs brown; under wing-coverts light brown; pectoral tufts bright yellow.

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689

Iris dark brown ; bill, legs and feet black.

Length 6·75 ; wing 2·25 ; tail, to end of two long centre feathers 3·20, of next 2·20 ; tarsus 0·65 ; culmen 0·90.



Tail of *Anthobaphes violacea*. ♂

*Adult female*.—Without metallic plumage ; above, olive-brown, tinged with yellow on the lower back and upper tail-coverts ; wing and tail-feathers brown bordered externally with olive-yellow ; below paler olive-brown tinged with yellow on the abdomen ; under wing-coverts greyish-yellow.

Length 5·00 ; wing 2·10 ; tail 1·80 ; tarsus 0·65 ; culmen 0·85.

*Young males*.—At first resemble the female. When about six months old they have gained the orange-red breast and yellow pectoral tufts, and metallic feathers are commencing to appear among the lesser wing-coverts and on the crown and throat ; the tail is nearly square.

*Distribution*.—Confined to Cape Colony and most abundant at its south-western extremity, on the Cape Peninsula, the Hottentots Holland and Drakenstein Mountains. Fairly common in Little Namaqua Land, but does not range to the north of the Orange River, nor does it extend much to the east of Grahamstown, its distribution being coincident with that of certain heaths.

*Habits*.—The Orange-breasted Sunbird frequents open uncultivated country, rough hillsides, and the slopes and summits of mountain ranges, and especially localities where various heaths and proteas abound. It has a considerable vertical range, from the sea level to a height of 4,000 feet or more, and being a hardy little bird, seemingly indifferent to cold and wet, it is quite at home on the bleak and foggy mountains of the coast ranges in Cape Colony. Of rather tame and unsuspicious habits, the beautiful male frequently allows a close approach as he sits on the summit of a low bush or spray



of heath, uttering at intervals a "sparrow-like" chirp, or, during the breeding season, a brisk and cheerful song. These Sunbirds feed largely on the nectar of various heaths, occasionally on that of proteas, also on small insects that frequent these flowers, and on gnats and flies which they dart upon, like Flycatchers, from a perch to which they constantly return. Like the Long-tailed Cape Sugar Birds, they breed during the winter rains, the nests near Cape Town being usually built in June and the eggs laid in July. This coincides with the flowering season of certain heaths and proteas, on whose nectar they feed their young. On one occasion I found a nearly completed nest at the end of March. The nest,



*Anthobaphes violacea* and nest.

oval and domed, with a small side entrance near the top, is built of small flexible twigs of heath, dry grass, and narrow downy leaves, thickly lined with the soft white petals of a protea. It is not pendent like the nests of other Sunbirds, but is attached by its sides to the stalks in the centre of a thick bush of heath, a foot or eighteen inches off the ground.

The eggs, two in number, are white, dotted all over, but most thickly round the greatest diameter, with small spots and streaks of greyish-brown. They measure  $0.65 \times 0.48$ . On one occasion I noticed a female remove the eggs from a nest, from which I had startled her, and place them under some thick undergrowth a few feet away. She apparently carried them in her bill.

A second brood is frequently reared in September and October. From December until March these Sunbirds are generally in small family parties of four or six, the parents and their young, one of the band being nearly always a male in full plumage, while one or two are young males showing varying amounts of metallic plumage.

#### Genus IV. **ANTHOTHREPTES.**

*Type.*

**Anthreptes**, Swains. *Fauna Bor.-Amer. Birds*, p. 495 (1831)

*A. malaccensis.*

Bill shorter than or equal to the head in length; both the culmen and gonyes nearly straight; nostrils with an operculum, basal, not concealed by plumes or bristles. Wing with the first primary very short; the tip formed by the third, fourth and fifth. Tail square, or but slightly rounded, shorter than the wing. Tarsus scaled anteriorly. Plumage: both sexes, and even the nestling in *A. collaris*, with metallic plumage. About twelve species, ranging over the Ethiopian and Indo-Malayan Regions, are included in this genus. One species is found in South-eastern South Africa, and a race on the Zambesi River and in Eastern Africa.

Sunbirds of this genus do not differ from the typical *Cinnyrides* in their habits.

#### *Key to the Species.*

- a.* Upper surface metallic golden-green ..... *A. collaris*, ♂, p. 297.
- b.* Upper surface metallic golden-copper..... *A. collaris hypodilus*,  
♂, p. 298.

171. **Anthothreptes collaris.** *Collared Sunbird.*

Le sucrier gamtocin ou á cordon bleu, *Levaill. Ois. d'Afr. vi, p. 174, pl. 299* (1808).

*Cinnyris collaris*, *Vieill. Nouv. Dict. d'Hist. Nat. xxxi, p. 502* (1819).

*Nectarinia collaris*, *Layard, B. S. Afr. p. 77* (1867).

*Anthodiæta collaris*, *Shelley, Monogr. Cinnyridæ, p. 339, pl. 110* (1877); *Sharpe, ed. Layard, B. S. Afr. p. 320* (1884).

*Anthothreptes collaris*, *Gadow, Cat. B. M. ix, p. 116* (1884); *Shelley B. Afr. i, p. 6* (1896).



*Anthothreptes collaris.*

*Description. Adult male.*—Above, including the head and least wing-coverts, metallic golden-green; greater coverts and secondaries brown edged with metallic-green; primaries brown edged with olive-yellow; tail-feathers black edged with metallic-green; throat metallic golden-green bordered below by a pectoral band of violet; rest of under surface yellow; pectoral tufts bright yellow.

Iris brown; bill, legs and feet blackish.

Length 3.90; wing 2.10; tail 1.50; tarsus 0.65; culmen 0.50.

*Adult female.* Resembles the male above, but the entire under surface of body is yellow.

*Young.*—Resemble the female; nestlings even showing the metallic plumage of the adult female, according to Captain Shelley.

*Distribution.*—From the Gamtoos River in Cape Colony, where it was first discovered by Levaillant, eastward through Eastern Cape Colony, where it is rather locally distributed, to Natal and Zululand. In Natal it is a common species, according to my own observations, both on the coast and inland, but Mr. Ayres remarks "these birds are decidedly scarce, though found throughout Natal."

*Habits.*—These beautiful little Sunbirds frequent low, flowering bushes and are rarely seen on the higher trees. I have met with them in Natal, in winter, both in the thick bush near the coast, and among scattered bushes in somewhat exposed localities further inland. At this season they were invariably in large or small

*Al - unknown to Zulu - Subsp. nova 694*



parties, engaged in busily hunting over the leaves and flowers in search of small insects and nectar. In Natal this Sunbird is double brooded, the first young being hatched in January, the second in March. The domed nest, small, and neatly constructed of fine dry grass lined with horsehair and feathers, is usually suspended, at no great height above the ground, from the outer twigs or leaves of a thick bush, frequently from a young orange-tree. The eggs, invariably two in number, are greyish-white, thickly mottled and dotted with slate-grey and brown. They measure  $0.58 \times 0.42$ .

172. *Anthothreptes collaris hypodilus*. *Zambesi Collared Sunbird*.

*Nectarinia hypodila*, Jardine, *Contr. Orn.* 1851, p. 153.

*Anthodiæta zambesiana*, Shelley, *Monogr. Cinnnyridæ*, p. 343, pl. iii, (1877); Sharpe, ed. *Layard's B. S. Afr.* p. 321 (1884).

*Anthothreptes collaris zambesiana*, Gadow, *Cat. B. M.* ix, p. 117 (1884).

*Anthothreptes hypodilus*, Shelley, *B. Afr.* i, p. 6 (1896).

*Description.* *Adult male*.—Similar to the male of *A. collaris*, but the metallic golden-green plumage of the latter is in *A. collaris hypodilus* replaced by metallic golden copper-colour, and the secondaries are tinged with green and glossed with golden copper-colour.

Iris dark brown; bill, legs and feet black.

Length 4.00; wing 2.00; tail 1.50; tarsus 0.60; culmen 0.50.

*Adult female*.—Resembles the male above, but is entirely yellow below.

*Young*.—Resemble the female.

*Distribution*.—From the south bank of the Zambesi to British East Africa.

*Habits*.—Like those of *A. collaris*.

## Family XI. ZOSTEROPIDÆ.

The "White-eyes," so-called from the conspicuous ring of white feathers which encircles the eyes of the majority of the species, are birds of small size and very uniform style of coloration. Their relationships are rather doubtful. By Dr. Sharpe and Captain Shelley they are placed in a distinct family between the Tits (*Paridæ*) and the Oriental Flower-peckers (*Dicaidæ*), by Mr. Oates among the *Brachypteryginae* and by Dr. Gadow among

692. *Gannungia reichenowi* Gannung Sunbird  
693. *Lamprothreptes longmani nyassae*  
Nyasa Blue Sunbird

the *Meliphagidæ*. The numerous species may be included in a single genus.

### Genus I. ZOSTEROPS.

*Type.*

**Zosterops**, Vigors and Horsf., *Trans. Linn. Soc.*

xv, p. 235 (1827) ..... *Z. cærulescens*.

Bill about half the length of the head, slightly curved or nearly straight, moderately slender and pointed, the upper mandible generally notched, otherwise the edges of both mandibles smooth in the majority of the species, including the South African, but in others the upper mandible is said to be serrated (Evans, "Cambridge Natural History," Birds, p. 568). The nostrils are pierced in a large membrane in a broad groove. The tongue is protractile and bifid, in some of the species smooth, in others with the tips frayed out, "brush-tipped," and with the margins infolded. The wing has ten primaries, but the outermost is so minute that it is seen with difficulty, and, as pointed out by Mr. Oates, is generally found over instead of under the second primary; the second primary long, the third, fourth and fifth the longest. The tail is short, about two-thirds the length of the wing, square or slightly emarginated; the tarsus is moderately long; the outer and middle toes are united at the base. The plumage is never metallic nor streaked nor spotted, but is, in almost all the species, of some shade of green, olive, yellow or grey.

Nearly one hundred species of "White-eyes" have been described, distributed over the Ethiopian, Oriental and Australasian Regions. Two species occur in New Zealand, where they are known as "Blight-birds" from their feeding on one of the scale-insects, others range as far east and north as China, Japan and Amoor Land. Thirty species occur in Africa, including Madagascar and the Comoro Islands, but only four range to the south of the Zambesi River. In their actions when feeding and in many of their habits the "White-eyes" resemble the Tits, still more closely some of the American *Mniotiltidæ*. When not nesting they invariably hunt in small parties and keep up a constant twittering as they actively climb about bushes and trees, and carefully search the leaves and flowers for small insects and saccharine juices. At certain seasons they feed to some extent on soft fruit, but their principal food at all times consists of various scale-insects. All the

665 *Zosterops annulosa annulosa*  
Cape White Eye  
*Z. a. amoori*  
Amoor's White Eye

White-eyes appear to lay unspotted pale blue eggs in small cup-shaped nests built in trees or bushes.



*Zosterops capensis.*

*Key to the Species.*

- a. Above olive-yellow; the forehead and rump yellower; below bright yellow, the sides and flanks tinged with olive ..... *Z. anderssoni*, 300.
- b. Above grass-green; the forehead and under surface bright yellow, the sides and flanks tinged greenish ..... *Z. virens*, p. 301.
- c. Above olive-green; the forehead, throat and under tail-coverts yellow; rest of under surface white tinged with tawny..... *Z. pallida*, p. 302.
- d. Above olive-green; the forehead olive-yellow; the throat and under tail-coverts bright yellow; rest of under surface light brown..... *Z. capensis*, p. 302.

688

173. **Zosterops anderssoni.** *Andersson's White-eye.*

*Zosterops senegalensis*, Sharpe, ed. Layard's *B. S. Afr.* p. 325 (1884);  
*id.* *Cat. B. M.* ix, p. 181 (1884). [*nec Bp.*]

*Zosterops anderssoni*, Shelley, *Bull. B. O. Club*, 1892, i, p. 5; *id. Ibis*,  
1893, p. 118; 1896, p. 180; *id. B. Afr.* i, p. 7 (1896).

*Description.* *Adult male.*—Above, crown, back and least and middle wing-coverts, olive-yellow; the forehead and rump yellower; greater wing-coverts, quills and tail-feathers brown edged with yellowish; lores black; eye-ring white; below, bright yellow, tinged with olive on the sides and flanks.

Iris brown; bill black; legs and feet dark brown.

Length 4.50; wing 2.45; tail 1.90; tarsus 0.65; culmen 0.45.

*Distribution.*—All Africa south of the Sahara, excepting the forest region on the west coast and the extreme south. Obtained by Andersson on the Okavango River, but not either in Great Namaqua or Damara Land; by Anchieta in Mossamedes, and by Whyte in Nyasaland.

667 *Zosterops vaalensis*  
*Vaal River White-eye*

669 *Z. - flavilateralis*  
*Yellow white eye*



*Habits.*—Andersson writes, "It was only as I approached the Okavango that I became aware of its existence. In the thornless forests bordering upon this stream it is not uncommon, but it migrates northwards during the dry season. It is found in small flocks, and diligently explores in search of insects the branches of the smaller trees, and especially the buds and flowers, suspending itself in a variety of positions while it is thus employed."

640 174. *Zosterops virens*. *Green White-eye*.

*Zosterops virens*, *Bp. Conspectus*. i, p. 399 (1850); *Layard, B. S. Afr.* p. 110 (1867); *Sharpe, ed. Layard's B. S. Afr.* p. 325 (1884); *id. Cat. B. M.* ix, p. 182 (1884); *Holub and Pelzeln, Orn. Südafri.* p. 75 (1882); *Shelley, B. Afr.* i, p. 7 (1896).

*Description.* *Adult male.*—Above, crown, back, rump and wing-coverts, grass-green, tinged with yellow on the upper tail-coverts; primary-coverts, quills and tail-feathers dusky-brown edged with green externally; lores black; eye-ring silvery white; forehead, front cheeks and under surface of body bright yellow, the sides and flanks greenish; axillaries bright yellow; under wing-coverts yellowish-white.

Iris pale tawny; bill grey, the tip black; legs and feet grey.

Length 4.80; wing 2.45; tail 2.00; tarsus 0.72; culmen 0.45.

*Adult female.*—Rather smaller and somewhat duller in colour.

*Distribution.*—Eastern Cape Colony, Natal, Zululand and the Transvaal, ranging into Swaziland, Mosambique, Matabili and Mashonaland and extending across the Zambesi River into Nyasaland. Very common in the Rustenburg and Lydenburg districts of the Transvaal.

*Habits.*—In its habits the Green White-eye does not differ materially from the commoner Cape species. It frequents brushwood on the slopes of hills, the undergrowth of forests, and the thickets on the banks of streams. Its call-note resembles that of *Z. capensis*, but is perhaps not quite so loud. Like the latter species it feeds on insects, nectar, and small soft fruits. It builds a similar nest and lays four pale blue (Ayres says white) unspotted eggs, measuring 0.64 × 0.48.

*Z. flavicollis longirostris* Sud of Lake 64

*pallida Pallid*175. **Zosterops pallida.** *Pale White-eye.*

*Zosterops pallida*, Swains. *Anim. in Menag.* p. 294 (1837); *Layard B. S. Afr.* p. 117 (1867); *Sharpe, ed. Layard's B. S. Afr.* p. 324 (1884); *id. Cat. B. M.* ix, p. 160 (1884); *Shelley, B. Afr.* i, p. 7 (1896).

*Zosterops lateralis*, Sundev. *Æfv. K. Vet.-Akad. Förh. Stockh.* 1850, p. 101; *Layard, B. S. Afr.* p. 117 (1867).

*Description. Adult male.*—Above, olive-green; wing-coverts like the back; upper tail-coverts yellower; forehead and lores yellow; line before and under eye black; eye-ring white; ear-coverts and sides of face olive-green; wing and tail quills dark brown edged externally with greenish; cheeks, throat, edge of wing and under tail-coverts yellow; rest of under surface white tinged with tawny, the sides and flanks with grey-brown; under wing-coverts white.

Length 4.75; wing 2.35; tail 2.00; tarsus 0.70; culmen 0.50.

*Adult female.*—Resembles the male in plumage.

*Distribution.*—The valley of the Orange River, ranging into the Southern Transvaal. Colesberg (Ortlepp).

*Habits.*—Mr. T. Ayres, who met with this species in the Transvaal, writes of it: "occasionally seen in small companies, actively hopping and climbing about the hedges and trees during the winter months."

176. **Zosterops capensis.** *Cape White-eye.*

Le tcheric, *Levaill. Ois. d'Afr.* iii, pl. 132 (1802).

*Zosterops capensis*, Sundev. *Æfv. K. Vet.-Akad. Förh. Stockholm*, 1850, p. 102; *Layard, B. S. Afr.* p. 116 (1867); *Gurney in Anderson's B. Damara Land*, p. 75 (1872); *Sharpe, ed. Layard's B. S. Afr.* p. 322 (1884); *id. Cat. B. M.* ix, p. 171 (1884); *Shelley, B. Afr.* i, p. 7 (1896).

*Zosterops madagascariensis*, Holub and Pelzeln, *Orn. Südaf.* p. 75 (1882).

"Witte-oogie," "Glas-oogie" and "Karre-oogie" of the Dutch.

*Description. Adult male.*—Above, with the wing-coverts, olive-green, tinged with yellow on the rump and upper tail-coverts; wing and tail quills brown tinged externally with olive-green; forehead olive-yellow; lores black; eye-ring white; ear-coverts and sides of face green; fore cheeks and throat bright yellow, merging into light brown on the chest and abdomen, the sides tinged with grey, the flanks with fulvous; under tail-coverts and tarsal joint bright yellow; axillaries and under wing-coverts yellowish-white.

*6666 L-70-describe Cula Namaga Dutch*

Iris brownish-yellow ; bill, legs and feet bluish-grey.

Length 4.75 ; wing 2.35 ; tail 1.85 ; tarsus 0.70 ; culmen 0.50.

*Adult female*.—Similar to the male in plumage.

*Distribution*.—Throughout Cape Colony and Natal, ranging into Southern Great Namaqua Land, the Orange Free State, the Southern Transvaal, and Zululand. A very common species in most districts of Cape Colony, being abundant near Cape Town, Swellendam, Knysna, Port Elizabeth, Grahamstown, and East London, and more or less numerous over the greater portion of the Karroo. Very abundant in Upper Natal, less so near the coast.

*Habits*.—The common White-eye, when not breeding, is invariably in small family parties, consisting of the parent-birds and the young of the preceding season, or frequently, of several family parties conjoined. They generally attract attention by the somewhat sharp "chirp" that every individual bird constantly utters both while feeding and when flying from tree to tree. They are, as a rule, extremely tame, feeding undisturbed within a few feet of an observer, diligently hunting over the leaves and twigs, and peering into the blossoms in search of small larvæ and insects, and especially of some of the scale-insects (*Schizoneuræ*). At certain seasons they feed to a considerable extent on soft fruits, apricots, plums, and especially blackberries ; they are fond, too, of the saccharine juices of many flowers, and, in the Municipal Gardens at Cape Town, constantly resort to various favourite shrubs, notably the Australian "Bottle-brush," for the sake of the nectar of the blossoms. From constantly probing the corollæ of flowers, the feathers of the head are nearly always more or less dusted over with pollen, and these little birds, like the Sunbirds, must play a considerable part in the cross-fertilisation of many plants.

The nest is built among the smaller twigs at the extremity of a horizontal branch of a bush or low tree. It is very small, of a shallow cup-shape, and is neatly constructed of fine tendrils and moss, glued together with cobweb and frequently decorated on the outside with pieces of grey lichen. The interior is lined with hair. The eggs, four or five in number, are unspotted pale blue. They measure  $0.66 \times 0.50$ .

Both parents incubate the eggs, which are hatched at the end of ten days. The nestlings are fed on soft larvæ, small caterpillars and the saccharine juices of flowers by both male and female.



## Family XII. PARIDÆ.

Bill short (shorter than the head), conical and not notched nor decurved at the tip; the culmen broad, rounded and not ridged at the base. Nostrils rounded, basal and without any membranous covering, but hidden by dense bristles and feathers directed forward. Wings with ten primaries, the first much shorter than the second, the third, fourth and fifth longest. Tarsus longer than the middle toe and claw, but less than twice the length of the toe without the claw, scutellated anteriorly; the middle toe united to the lateral toes at the base. Plumage soft and lax, and neither spotted nor streaked. The sexes alike or nearly alike in colour, the young somewhat paler as a rule.

This family contains about eighty species, distributed over the entire globe with the exception of South America, the Pacific Islands and the Arctic and Antarctic Regions. Six species and subspecies are found in South Africa. The Tits are generally met with in small parties, hunting about bushes and trees for insects and their eggs. The typical Tits build in holes of trees, rocks or on the ground, and lay numerous white eggs sparingly spotted with red; the Penduline Tits construct elaborately woven domed nests in trees or bushes, and lay pure white eggs.

*Key to the Genera.*

- a. Outline of the culmen and gonys curved; the point of bill rather blunt..... *Parus*, p. 304.
- b. Outline of the culmen and gonys straight; the point of bill extremely acute..... *Ægithalus*, p. 309

Genus I. **PARUS.***Type.*

**Parus**, *Linncæus*, *Syst. Nat.* i, p. 341 (1766) ..... *P. major*.

Bill short, strong, conical, unnotched, blunt at the tip, the culmen curved from base to tip. Nostrils small, round and concealed by bristles and short frontal plumes directed forwards, but without an operculum. Wing with ten quills, the first primary well developed, but less than half the length of the second, the fourth or fifth the longest. Tail slightly rounded or even. Tarsus rather short and scutellated anteriorly; feet strong, the hind claw strong and hooked. Plumage not streaked nor cross-barred. Sexes alike.

The Tits are small in size, usually of arboreal habits and feed chiefly on insects, occasionally on small seeds.

About sixty species and subspecies are known, distributed over Europe, Asia, Africa and North America. Four species and subspecies occur in South Africa.



Wing, head and foot of *Parus afer*.

*Key to the Species.*

- a.* Back and lesser wing-coverts grey ..... *P. afer*, p. 305.
- b.* Back pale reddish-grey; wing-coverts blackish-brown ..... *P. pallidiventris*,  
p. 307.
- c.* Back glossy blue-black; lesser and middle wing-coverts white ..... *P. niger*, p. 307.
- d.* Back dull black; wing-coverts as in *P. niger typicus* ..... *P. niger xanthostomus*, p. 308.

492

*Cape*

177. **Parus afer.** Grey Tit.

*Parus afer*, *Gm. Syst. Nat.* i, p. 1010 (1788); *Gray, Gen. B.* i, p. 192 (1847); *Jard. and Selby, Illustr. Orn.*, pl. 117 (1830); *Gurney in Andersson's B. Damara Land*, p. 81 (1872); *Gadow, Cat. B. M.* viii, p. 39 (1883); *Sharpe, ed. Layard's B. S. Afr.* p. 329 (1884); *Shelley, B. Afr.* i, p. 9 (1896).

La Mésange grisette, *Levaill. Ois. d'Afr.* iii, pl. 138 (1805).

La Mésange brune, *Levaill. Ois. d'Afr.* iii, pl. 139, fig. 2 (1805).

*Parus cinerascens*, *Vieill. Nouv. Dict.* xx, p. 316 (1818); *Layard, B. S. Afr.* p. 113 (1867).

*Parus cinereus*, *Layard, B. S. Afr.* p. 112 (1867) [Young].

"Slangwyte" of the Dutch Colonists.

*Description. Adult male.*—Above, back and lesser wing-coverts grey; rest of coverts black edged with white; quills dark brown, edged externally with grey; upper tail-coverts and tail black, the tail tipped with white, the outer web of outer feather white; crown and lores black; back of nape, ear-coverts and streak below eye white; cheeks, throat and centre of breast black; rest of under surface grey; axillaries and under wing-coverts whitish; under surface of quills brown, their inner edges white.

Iris dark brown; bill black; legs and feet lead colour.

Length 5.50; wing 3.00; tail 2.25; tarsus 0.75; culmen 0.50.

*Adult female.*—Is duller in plumage and slightly smaller.

Length 5.25; wing 2.90; tail 2.25.

*Young.*—Are ash-brown where the adults are grey; wings and tail brown, the quills edged with white; crown brownish-black; neck and sides of face dull white; throat and chest dull black; the flanks ash-brown.

*Distribution.*—The Grey Tit is found over the greater part of Cape Colony, but more commonly towards the western extremity. It is a common species in the Karroo, on the Orange River, and in Little Namaqua Land. In the Eastern Colony it becomes rarer. It has been recorded from Hopetown and Colesberg in the Colony, and from Bloemfontein in the Orange Free State. To the north of the Orange River it occurs sparingly in Griqualand West, Bechuanaland, and Great Namaqua and Damara Lands, ranging as far north as Lake Ngami, the Okavango River and Benguela. In the Transvaal it is, according to Ayres, abundant in the wooded Megaliesbergen and found more sparingly on the wooded rivers. It occurs commonly in Matabililand and in the Bamangwato country according to Buckley, and Marshall has collected examples near Salisbury in Mashonaland.

*Habits.*—Although, like most of the family, this Tit shows a certain partiality for trees or bushes, when they are present, it frequently inhabits very arid and desolate localities, covered only by a thin growth of Karroo scrub. Here they hunt over the stones and rocks in search of insects, and build their nests in



holes in the ground. On one occasion I met with a family party of these Tits climbing about a paling round the grave of a shipwrecked sailor on the sandy coast of Namaqua Land, at a distance of quite forty miles from the nearest tree.

Layard met with this Tit in the Karroo, between Nel's Poort and the Swartberg, "creeping about the sides of dry water-courses, clinging to the perpendicular banks and apparently searching for spiders." "In the Transvaal," says Ayres, "these birds are sparsely scattered along the rivers, frequenting scrub and bush, feeding upon insects, and creeping about the roots and low branches in search of their food; their flight is not prolonged, and their notes are harsh."

The African Grey Tit builds its nest in September, in a hole in a tree or rock, occasionally in a wall or even in the ground; it is a bulky, somewhat flat structure of dry grass and feathers, mixed with hair, wool, and fur. Usually five or six, but sometimes as many as twelve eggs are laid. They are white sparingly spotted with pale red, principally at the large end, and average  $0.68 \times 0.54$ .

#### 178. *Parus pallidiventris*. *Pale-bellied Tit*.

*Parus pallidiventris*, *Reichen. Journ. f. Orn.* 1885, p. 217; *Shelley, B. Afr.* i, p. 9 (1896).

*Description. Adult*.—Above, pale reddish-grey; wing-coverts and quills blackish-brown edged externally with white; tail-feathers black narrowly edged and tipped with white; head, face, chin and throat black, merging into slate-grey on the chest and pale fawn-colour on the abdomen.

Iris brown; bill, legs and feet black.

Length 6.00; wing 3.30; tail 2.60; tarsus 0.80; culmen 0.50.

This Tit differs from *Parus rufiventer*, Bocage, of Benguela, in being much paler on both the back and abdomen.

*Distribution*.—East Africa, ranging southward to Mosambique and Mashonaland (Francis).

#### 179. *Parus niger*. *Black Tit*.

La Mésange noire, *Levaill. Ois. d'Afr.* iii, pl. 137, figs. 1, 2 (1805).

*Parus niger*, *Bonn. et Vieill. Enc. Méth.* p. 508 (1823); *Gurney in Andersson's Birds Damara Land*, p. 81 (1872); *Gadow, Cat. B. M.*

491  
494 *Parus rufiventris rufiventris*  
Rufous Tit  
494<sup>a</sup> *P. r. - rufiventris*  
Rufous Tit

viii, p. 7 (1883); *Sharpe, ed. Layard's B. S. Afr.* pp. 331, 835 (1884); *Shelley, B. Afr.* i, p. 9 (1896).

*Parus leucopterus, Swains. Classif. B.* ii, p. 246 (1837); *Layard, B. S. Afr.* p. 113 (1867).

*Description.* *Adult male.*—General colour, above and below, glossy blue-black, tinged with brown on the abdomen and under tail-coverts, the latter edged with white; least and middle wing-coverts white with their bases black; greater coverts black broadly edged and tipped with white; quills black edged externally with white; tail-feathers black tipped with white, the outer web of the outermost white; under wing-coverts white.

Iris dark hazel; bill black; legs and feet lead-grey.

Length 5·80; wing 3·15; tail 2·75; tarsus 0·80; culmen 0·45.

*Adult female.*—Less glossy than the male; below dark lead-grey; wing-coverts and quills with narrower white edgings.

*Distribution.*—Eastern Cape Colony and Natal, where it is fairly common in all the forest districts, ranging into Portuguese East Africa and the Transvaal and extending northward and westward through Mashona and Matabili Lands to Lake Ngami, the Okavango River, Damara Land and Benguela.

*Habits.*—Everywhere confined to the bush and forest districts and preferring the larger growth of trees as a hunting ground. In the Natal bush it is a common bird, and is constantly met with in small bands of five or six individuals busily hunting about the tree-tops for insects. Its contrasting colours of black and white render it rather a conspicuous bird, and it frequently attracts attention by its harsh call-note. Mr. Ayres found a nest near Pinetown in Natal, containing one egg and four callow young. "The old bird had evidently taken possession of a deserted Woodpecker's nest. The hole was in a perpendicular and decayed bough of a large tree, about twenty feet from the ground; it was about a foot in depth, and there was a little fine grass at the bottom, on which the egg and young birds were placed."

Eggs of this Tit are white sparingly spotted with pale red, and measure 0·67 × 0·53.

180. ***Parus niger xanthostomus.*** *Zambesi Black Tit.*

*Parus xanthostomus, Shelley, Bull. B. O. Club, 1892, i, p. vi; id. Ibis, 1893, pp. 17, 118.*

*Description.*—Similar to *Parus niger*, but differs in the upper parts being dusky black, with a green instead of a blue gloss on the

493 *Parus cinerascens cinerascens*  
 West Ashy Tit  
 493 c P. c. - *parvirostris*  
 East Ashy Tit

crown; wings with the base of the median coverts black and the edges of the quills shaded with olive-yellow; throat and under surface of body ashy grey; bill black, with the inside of the mouth bright yellow; legs olive shaded grey. Total length 6·00; wing 3·15; tail 2·70; tarsus 0·75; culmen 0·45 (Shelley).

*Distribution*.—The type specimen was collected on the south bank of the Zambesi by Dr. Bradshaw; a second example, in the British Museum, is labelled "Grahamstown (Atmore)." The only other example known was forwarded by Mr. A. Whyte from Mpimbi on the Upper Shiré River and is recorded by Capt. Shelley in the "Ibis" for 1893, p. 17.

## Genus II. ÆGITHALUS.

### *Type.*

**Ægithalus**, *Boie, Isis*, 1822, p. 556 ..... Æ. *pendulinus*.

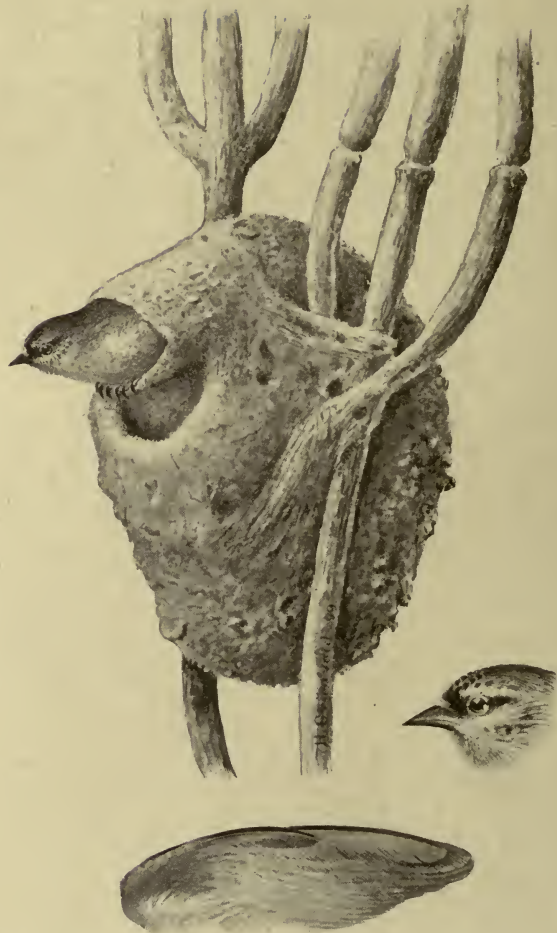
Bill short and very acutely pointed, the outline of both culmen and gonyes straight, the sides compressed. Nostrils basal and lateral, the opening concealed by projecting frontal plumes. Wings rather short, the first quill very short, the second nearly as long as the third and fourth, which are equal and longest. Tail short and slightly forked. Tarsus as long as middle toe, scutellated anteriorly. Toes moderate, the hind-toe long and strong, the claws long and acute. Plumage of plain colours and destitute of spots and streaks. Sexes alike.

About a dozen species and subspecies of Penduline Tits have been described. They range over Eastern and Western Asia, Southern Europe and a large portion of Africa, whilst a single species inhabits Mexico and the Southern United States. Two species are found in South Africa. They are all birds of minute size, insectivorous as regards their food, and well known for their ingeniously woven and felted domed nests. They lay from six to twelve unspotted white eggs.

### *Key to the Species.*

- a.* Under surface of body pale yellow..... Æ. *capensis*, p. 310
- b.* Throat and breast dull white, merging into reddish-buff on the abdomen, flanks and under tail-coverts Æ. *caroli*, p. 312





Nest, head and wing of *Ægithalus capensis*.

495 181. *Anthoscopus monachus monachus* *monachus*  
**Ægithalus capensis.** Cape Penduline Tit.

*Parus capensis*, Gmelin, *Syst. Nat.* i, p. 1011 (1788).

Le becque-fleur, Levaillant, *Ois. d' Afr.* pl. 134, figs. 1 & 2 (1805).

*Ægithalus capensis*, Swainson, *Class. B.* ii, p. 246 (1837); Holub and Pelzeln, *Orn. Südaf.* p. 81, fig. (1882); Gadow, *Cat. B. M.* viii, p. 70, pl. i, fig. 2 (1883); Shelley, *B. Afr.* i, p. 9 (1896).

*Anthoscopus capensis*, Cabanis, *Mus. Hein.* i, p. 89 (1850); Sharpe, ed. *Layard's B. S. Afr.* pp. 327, 834 (1884).

*Paroides capensis*, Layard, *B. S. Afr.* p. 114 (1867).

"Cappoc Vogel" (Cotton Bird) of the Dutch.

495 B. A - w - Smith's Vocal Min. n. l. 4  
495 C. A - w - D. w. are w. w.  
D. w. are w. w.

*Description.* *Adult male*.—Above, greyish-olive merging into yellowish-olive on the rump and upper tail-coverts; wings and tail light brown; crown rather greyer than the back; the feathers of forehead and lores black tipped with white; a slight eyebrow, a ring round the eye and the sides of face dull white, the ear-coverts slightly darker; chin and under tail and wing-coverts dull white; remaining under surface of body pale yellowish.

Iris yellowish-brown; bill, legs and feet brown.

Length 3.60; wing 2.00; tail 1.60; tarsus 0.55; culmen 0.40.

*Adult female*.—Slightly smaller in size and duller in colour.

Length 3.30; wing 1.90; tail 1.45.

*Young*.—Resemble the female.

*Distribution*.—Very generally distributed in Cape Colony, but most abundant on the west coast, becoming rarer towards the Orange River; it ranges over the greater portion of the Orange Free State and the Transvaal but is somewhat locally distributed in Natal and Zululand. To the north of the Orange River it occurs in Griqualand West, in Southern Bechuanaland and in Great Namaqua Land, but in Damara Land, in Northern Bechuanaland and in Rhodesia it is replaced by the next species, *Æ. caroli*.

*Habits*.—The little “Cappoc Vogel” is to be met with in pairs or small family parties in almost every district within its range in which there is a sufficient growth of bushes to afford it a supply of insect food and a shelter for its nest. It is quite abundant among the “scrub” on the sandy west coast of Cape Colony and is equally common among the low bushes and mimosas of the Karroo, but I have never met with it in the forest districts. It is an active little bird, constantly in motion, climbing over and carefully examining the twigs and leaves of bushes for small insects and their eggs. Its ordinary call-note is a weak and almost inaudible “chirp,” but occasionally as it takes wing it utters a sharper cry. Its flight is weak and seldom protracted for any great distance but usually only from bush to bush. If one of a party flies off it is followed by the others in an irregular string. Towards the end of August, in Cape Colony, these Tits separate in pairs and soon after commence building their elaborately woven nests. A somewhat open bush is usually chosen as a site after a careful inspection lasting several days. In sheep-farming districts wool is nearly always used as a building material, elsewhere the cottony down of plants; but whatever the substance made use of, it is carefully woven and felted together in several distinct layers until the walls

of the domed nest consist of a tough cloth-like material impervious to rain. The nest is usually about four feet off the ground and is attached by its sides to several nearly parallel twigs. It varies in size and shape but is generally about seven inches high by four inches wide and more or less oval in form. The entrance is on one side near the top of the nest, through a short sleeve-like tube just wide enough to admit the bird. Immediately below it is a larger pocket or blind opening, in which, according to the Hottentots and Kaffirs, the male roosts. I once had an opportunity of watching a pair of Cotton Birds during the construction of their nest and for some time subsequently. As soon as the nest was completed the female laid an egg and added one every morning until seven were deposited. On leaving the nest after laying, and sometimes when inside, she generally carefully closed the entrance by pinching the upper and lower lips of the entrance-tube together with her bill until no visible aperture was apparent; on one occasion, before leaving the nest for the day, she stitched the upper lip to the lower, so effectively, that on her return it was some time before she herself could effect an entrance; but on other occasions no attempt was made to close the opening during the day. It appeared to me at the time that the temperature of the interior of the nest was probably regulated by opening or closing the entrance tube, at the same time the nest with the entrance closed would be comparatively secure against the assaults of egg-eating snakes and lizards, reptiles which are common enough in most of the localities frequented by the "Cappoc Vogel."

From six to twelve eggs are laid by the Cotton Bird, in September and October in Cape Colony.

They are very small, pure white in colour and usually elongated in shape. They average  $0.56 \times 0.38$ .

Le Vaillant figures the nest of this Tit correctly in plate 131 of "Les Oiseaux d'Afrique" but erroneously ascribes it to "Le Pinc Pinc," *Cisticola textrix*, a bird that builds a very different style of nest. A nest mentioned by Andersson in the "Birds of Damara Land," p. 89, as that of this Tit, must have been that of some other species, containing, as suggested by Mr. Gurney, the egg of a Cuckoo.

*Anthus capensis caroli*

182. *Ægithalus caroli*. Andersson's Penduline Tit.

*Ægithalus minutus* (nec Shaw), Sharpe, Cat. Afr. B. p. 35 (1871).

*Ægithalus caroli*, Sharpe, Ibis, 1871, p. 415; Gadow, Cat. B. M. viii, p. 71, pl. i, fig. i, (1883); Shelley, B. Afr. i, p. 10 (1896).

496a. A. c. - Hellmayer  
East. African Tit



*Anthoscopus caroli*, Gurney in Andersson's *B. Damara Land*, p. 80 (1872); Sharpe, ed. Layard's *B. S. Afr*, pp. 327, 834 (1884).

"N'Kilo" of the *Matabilis* (Ayres).

*Description.* *Adult male*.—Similar to *Ægithalus capensis* but paler; the back olive-grey merging into reddish-buff on the rump and upper tail-coverts; wing-coverts brown with paler edges; quills dark brown edged with grey; tail-feathers the same: forehead dull white, the feathers tipped with grey; side of face dull white, ear-coverts darker; throat and breast dull white merging into reddish-buff on the abdomen, flanks and under tail-coverts; under wing-coverts dull white.

Iris brown; bill, legs and feet slate-colour.

Length 3·50; wing 2·00; tail 1·30; tarsus 0·55; culmen 3·38.

*Adult female*.—Slightly smaller but similar to the male in colour.

*Distribution*.—From Swaziland and Portuguese East Africa to Mashona and Matabililands, ranging northward to North Nyasaland, and westward through the Ngami District to Damara Land.

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